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ABSTRACT

These six newsletters present classroom tested activities in elementary economics. Each issue treats specific topics: scarcity, opportunity cost, production and specialization, consumption and demand, supply and production, prices and efficiency. In each issue, separate activities are provided for grades K-12, 3-4, and 5-6. For the most part, activities are self-contained and can be used in many different courses such as social studies, language arts, math, reading, and creative writing. Some examples of activities follow. Students take a field trip to a store to learn techniques merchants use to create demand. The class gathers data and draws a consumption bar graph for goods used in the classroom. In other activities students create songs about scarcity, role play Mother Goose rhymes (e.g. "Old Mother Hubbard") that reinforce the scarcity concept, and read and discuss stories, analyze graphs, and conduct a market survey. (Author/RM).

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The Elementary Economist ©

The National Center of Economic Education for Children

Vol. I, No. 1

DIRECTIONS

Welcome to the inaugural issue of **The Elementary Economist**©. This is a new publication, produced by the National Center of Economic Education for Children based at Lesley College, in Cambridge, Massachusetts.

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Our Purpose

The Elementary Economist© will present exciting classroom tested curricular models that bring economic principles actively into the lives of children. While the vital importance of understanding economics is widely recognized today, how is it to be accomplished? State mandates and tight curriculum designs leave no time for a new course of study. The answer is fourfold: 1) Economics already exists in every social studies program. 2) Economic lessons can be the motivator to facilitate learning in math and language arts. 3) Teachers that try it, like it! 4) Classroom teachers will find administrators very much in favor of more study of economics that is structured to be supportive of the system's curricular design. **The Elementary Economist**© will feature teaching activities at all elementary grade levels to demonstrate these points.

What is Economics?

Economics is essentially a field of study concerned with the welfare of people. Repeated observations of human behavior in all societies show that a significant part of the welfare of people is linked to their consumption, socially and privately, of goods and services produced by the economic system. Since there are so many differences between people, how can a democratic society that believes in the freedom of the individual allocate scarce resources among competing wants? How can it make those decisions "efficiently"? The study of economics begins with the concept of *Scarcity*. This condition requires decision making, and the study of efficient decision making is the heart of economic science.

THEME: SCARCITY

This issue of **The Elementary Economist**© concentrates entirely on the concept of *scarcity*. Each of the remaining issues of this school year will emphasize single and closely related concepts. Please contact us if you would like to share teaching ideas or suggest material for future issues. We are pleased to have you with us and look forward to hearing your reactions to our first issue of **The Elementary Economist**©.

Stanley P. Mengel
Director

PERSPECTIVES

by Dr. Henry Rosovsky

Dr. Rosovsky is Dean, Faculty of Arts and Sciences, Harvard University, and a member of the Advisory Board of The National Center of Economic Education for Children.

The study of economic principles begins with deceptive simplicity. The fact that desires of people, individually and in social groups, cannot be totally satisfied creates the necessity for decision making. How will we use our resources "efficiently" to fulfill people's wants? Alfred Marshall, the great 19th century economist, stated the problem: "Human wants and desires are countless and very various in kind. . .".[1] The study of economics starts by recognizing the fact of scarcity of resources relative to human wants and builds its logical structure by identifying other postulants of human behavior along with laws of production. The resulting body of thought provides great insight into the processes of individual action and the historical development of society. Understanding the reality of scarcity is an appropriate place to begin.

[1] *Book III, Chapter I, § I, of Marshall's "Principles".*

K-2

WHY CAN'T I HAVE IT?

by Polly Gray

Polly Gray has won a first and second prize in the International Paper Company Awards Program for excellence in teaching, is a field consultant for the Arkansas State Council on Economic Education, and has been a teacher in grades two through five.

Scarcity

From almost the first trip through the supermarket, a child begins to cope realistically with the basic economic problem — *scarcity* or "no one can have everything s/he wants." Each day millions of wishful children scan shelves in supermarkets and department stores and wonder why mothers and fathers refuse their requests for all the many tempting items. A child's cry in the marketplace usually signals to all around that someone has just placed a product back on the shelf, a product that the child wanted. By the time children reach kindergarten they are well aware of the fact of *scarcity*. But do they really understand it? A classroom economic project designed to promote an understanding of *scarcity* and how to deal best with it is very appropriate for the primary age child.

Goals

After relating the economic problem of *scarcity* to the students' immediate environments (home, neighborhood, and school) and engaging in "fun activities" such as role playing, games, poetry and stories, the following goals should be achieved:

1. The students will understand that everyone has unlimited wants to satisfy.
2. The students will realize that due to limited resources and unlimited wants *(scarcity)*, people need to make choices about which wants to satisfy.
3. The students will become aware that in making choices, people need to consider the alternatives foregone in order to satisfy the chosen want (opportunity cost).
4. The students will become aware that they are consumers of goods and services in order to satisfy their wants.
5. The students will understand that it takes *scarce* resources to produce the goods and services needed to satisfy people's wants.

Teaching Activities

1. To initiate a study of *scarcity*, the teacher can cause one or more specific *scarcity* situations to take place by control of the items desired by the children. Many *scarcity* situations occur naturally in classrooms and these can and should be used. *Scarcity* situations could be not having enough paper towels when children wash hands before lunch, not having enough of the correct color or the right size paper to do an art project, not having enough playing cards to a particular game, not having enough space on the playground during a play period, not having enough time to finish a classroom activity, etc. The teacher should carefully observe the children's reactions to the *scarcity* situation. When frustrations begin to surface, the teacher can initiate class discussions by asking the children to talk about the problems and why they exist. The teacher can then lead the children to think about and react to the question "Do we always have everything we want?" The teacher can utilize these discussions to introduce the words *scarce* and *scarcity* to children. During the discussions the teacher can encourage the children to re-evaluate the *scarcity* situations and offer solutions.

2. The game of "reverse musical chairs" can be used to further illustrate *scarcity*. The game begins with an equal number of children and chairs, about six of each. When the music stops the first time, each child will have a chair. This illustrates that all wants are satisfied. Next, add one child, adjusting the situation so that when the music stops one child will be left without a chair. (A want is not satisfied.) The teacher can ask the children what should be done with the child left standing. The children might suggest sharing. Continue the game, adding one more child each time. Remember to ask the question, posed after the second round, after each of the following rounds. As more children are left standing with their wants unsatisfied, the seated children may become less willing to share and maybe even refuse to share. At this time the teacher can discuss with the children "What was *scarce* during our game? Why did the chairs become more *scarce* as the game progressed? Why didn't sharing work as we added more children (wants) to the game? What other methods could be used to decide who gets the chairs?"

3. Have children draw self-portraits. Ask them to draw all the things they want around their portrait. Label these drawings with their names and display around the room. Discuss how wants seem to be unlimited. Induce the children to begin thinking about why we don't have everything we want. Discuss limited income, limited raw resources, limited time, etc.

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4. Make "family wants" booklet. Label each page: Daddy wants, Mother wants, my brother wants, etc. Have the children draw some of each family member's wants. Discuss how wants differ as children share their booklets with the class.

5. Bulletin boards like the one pictured could be designed by the children with original class poems about *scarcity*.

6. Read fairy tales or wishing stories to illustrate economic conflict between unlimited wants and limited resources. Examples: "The Fisherman and His Wife" and "The Three Wishes." Let children dramatize their stories.

7. Use Mother Goose rhymes and other favorite children's tales to reinforce the *scarcity* concept. Example: "Old Mother Hubbard" and "The Three Billy Goats Gruff." Have children take turns role playing.

8. Take opportunities to emphasize the concept of *scarcity* through stories in your basal reading program. Example: "Do You Have the Time, Lydia?," second grade reader, Houghton Mifflin reading series.

9. Play a game with numbers to reinforce recognition of *scarcity* situations. The teacher can read number problems to the children such as: Mary had a birthday party. Five children came. Mary's mother had purchased four balloons for the party. The children respond by raising their hands if they think *scarcity* exists, they keep their hands down if *scarcity* does not exist. Children's responses should be discussed.

10. Induce children to think of things that are *scarce* in their home, neighborhood and school. Discuss these. The children could tour the school building and take a walk through the neighborhood surrounding the school. After their return they could draw items that are *scarce* in their school or neighborhood. A bulletin board display could be entitled "Scarcity in our School and Neighborhood."

11. Create songs about *scarcity* to the tune of familiar songs. "Mary had a Little Lamb" could be "Do we know about *scarcity, scarcity, scarcity*? Do we know about *scarcity*? Yes, indeed we do!"

12. Encourage the children to tell stories about choices they have had to make. Record some of their stories on experience charts. Discuss their choices. Ask the children, "If we choose one thing, do we give up something else?." The item "given up" is the "opportunity cost" of the choice. Discuss the need for wise choices.

13. Ask the children to draw a picture of what they would purchase if they had 50 cents. Later have them draw what the opportunity cost of the choice would be. Label these drawings and display under headings: "This was my choice," "This was my opportunity cost."

14. Discuss with children how they consume goods and services as they satisfy their wants. Cover a flannel board with pictures of goods and services. Discuss with children the difference between a good and a service using the pictures as examples. Let a child take one down and call on another child to tell if it is a good or a service. If he tells correctly, he becomes the caller. After the game place the heading "Goods and Services" at the top of the flannel board. Call on children to place pictures under the correct heading. Later have children draw two pictures labeled "This is me consuming a good" and "This is me consuming a service."

15. Help children to discover that all the things that people want must be produced and production requires decisions as to the use of *scarce* resources. If a farmer grows wheat he can't grow corn. Producers in the home and school are good examples to use with the children. Role play situations that illustrate *scarcity* in production. For example, Mother is cooking supper and she realizes that she doesn't have all the ingredients she needs for her meatloaf. Solve Mother's problem. Could she *use substitutes*? Could she *change her menu*? Ask children to draw pictures of their family members as producers of goods and producers of services.

16. Review with the children *scarce* situations they have experienced since the beginning of the study of *scarcity*. The teacher can help the children supply the reasons why all their wants were not satisfied: not enough money; not enough workers; not enough raw materials; when resources are used for one thing they can't be used for anything else, etc. Emphasize the need to make wise choices because of *scarcity*.

17. A worthwhile culminating activity would be to have a "sharing of learning" with other classrooms in the school, therefore exposing the total school to the concept of *scarcity*. This could be done in the form of a play or musical created by the children with the help of the teacher.

3-4

SCARCITY OF CITY SITES

by Mary Gray

Presently an elementary resource teacher, Mary C. Gray has taught third and fourth grades in the Corvallis, Oregon, public schools where she has participated in the development of materials for the teaching of economics and Oregon history.

Scarcity

Economics is concerned with the allocation of *scarce* resources. The main resources that each society has to work with are land, labor and capital. These *scarce* resources are used by society to produce goods and services. This unit will concentrate on the concept of land as a *scarce* resource. *Scarcity* simply means that relative to human needs there are only a few (limited number, *scarce)* land sites that are suitable for use for the various needs of society. In this lesson, the *scarcity* emphasized is that of land usable as a river port.

As a society examines its land resources, it finds a *scarcity* of rivers to use as transportation systems to carry products to market. The number of good sites where ports and cities may be located on the river is also *scarce*. Early city sites were chosen along the river transportation systems as people tried to make good use of their *scarce* land resources.

Goals

1. Students will use the words *"scarce"* and *"resource"* as they describe why people choose certain sites for cities along a river.
2. After taking a close look at maps and studying the economic history of towns along a river, the children will be able to identify a number of towns which are located at a break between land and water transportation. The object is that the children will be able to state why the *scarcity* of rivers caused certain land transportation routes to develop in order to reach the *scarce* river ports.
3. By comparing maps of towns along a river in pioneer days to the maps showing present railroad and highway systems, the students will be able to name towns which are no longer economically alive. This activity will be directed towards assisting the children to understand that new technology (railroads and vehicles that travel by highway) has eliminated the problem of *scarce* river ports and allowed more sites to be feasible for constructing towns. They will note that the river ports are still available, but that *human wants have changed* because of the new technology. The problem of a *scarcity* of means of transportation has been decreased.
4. The students will be able to explain that the railroad system took over the job of the river steamboats and was a quicker way to reach a broader market. This lesson is a direct application of the points emphasized in the third goal. Railroads were superior to river ports because they were able to provide the same services over land that was more available (less *scarce)* than rivers and river ports.

Teaching Activities

A study of the location of city sites such as the one presented in "Unit Three: Where on Earth?" in the third grade Holt *Data Bank: Inquiring About Cities* (William R. Fielder, Editor, Holt, Rinehart & Winston, 1976, 1972) should include a study of *scarcity*. The unit can be adapted to local or state examples by teachers and districts which include state history in the third and fourth grade curricula. Teachers should look for waterways in their area which were used for transportation. For example, look at the Mississippi, Ohio and Illinois Rivers and the Erie Canal. Compare the towns along the rivers to those on a modern highway map. Check in county and state historical libraries and museums for materials on old steamboat, ferry or flatboat towns. These resources will provide a wealth of information to show the economic rise and fall of towns along the river. This particular example is of steamboat towns in Oregon.

Story to read to the class and discussion guidelines

"At first, pioneer families produced almost everything they needed by themselves. After a few years on their claims they began to specialize. They were able to sell or trade some of the things they made for other things other people made. Rivers formed a natural transportation system to carry goods to other markets but desirable sites for cities and rivers to carry goods were *scarce*. The major rivers used for transportation in Oregon were the Columbia and the Willamette. The pioneers raised wheat in the fertile Willamette Valley and shipped grain or flour on steamboats.

A large waterfall divides the Willamette River into two parts: steamboats were built both below the falls and above the falls at Portland. On the lower river, the majority of the steamboats were built at Canemah and Oregon City, which are now one town. Canemah was known as "the canoe place" by the Indians; it was a wide, low site where boats could be built and launched under ideal conditions. This was a very special resource. Both Indians and early settlers used it for boats because such perfect sites were *scarce*."

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Ask the class why a wide clearing on a low bank was a special and *scarce* resource good for building large steamboats.

"The fertile valley near the middle river was ideal for growing wheat. At the town of Lincoln, in the fall, one hundred loaded wagons would wait each day to be unloaded at the mill. After the wheat was ground into flour, each farmer could wait for an empty steamboat to flag to the side of the river and load his flour. But most busy farmers could not sit and wait for an empty boat because their time was a *scarce* resource. So one pioneer decided to go into business and open a warehouse. He would store the wheat, protecting it from thieves, animals and rain."

Ask the class what type of site an owner would seek for a warehouse. Where should it be built? Near what? Why would these sites be more *scarce* in some areas than in others? (A good landing site near a mill and wagon road—where land and river transportation meet. The requirement to be NEAR the river port means only a few sites would be feasible.) Why would the pioneer who built the warehouse be successful? (Time was *scarce* for farmers.)

"When empty boats came to the landing, the warehouse owner would load the wheat or flour and be paid. Then he would give the farmers their money, charging a loading and storage price for his work.

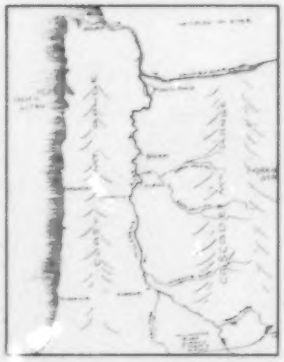
The river channel changed each year. Sometimes floods would destroy a landing site. Other times the channel would change and leave a site "high and dry" on a bank. There were a limited number of sites that were safe and good. They were a *scarce* resource."

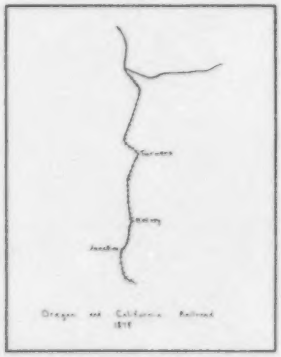
Ask the class to describe or draw an ideal site. Ask if they think there would be many such ideal sites. Stress that these are "scarce resources."

"Traffic on the river slowed in later years. Train tracks were laid across the West and South to California. Many people shipped their products on the faster trains. The number of fuel yards which stored wood for the steamboats decreased. Trees and weeds grew over the old landings and fuel yards, choking the banks and mouths of the small tributaries. Sand bars, snags and gravel piled up. No snag boats came to remove them. Eventually the river was no longer navigable. By then the railroads had drawn the shipping business which had once made the Willamette important."

Map Study

Using an overhead projector and transparencies, show the class a map of the Willamette River. A map of the steamboat landings can be placed over the river transparency. The towns along it should be named. Look for towns where land and water transportation meet—old mill sites, boat landings. Discuss what other economic enterprises were mentioned in the story.





Ask the class what jobs people had at the river towns (ship builder, dock worker, warehouse owner and worker, boat worker and pilot).

Another transparency of today's road map can be shown. A map of the railroad system can be presented. Children should compare names of towns and discover which ones have disappeared as the resource used for transportation, the river, was no longer important for shipping. The towns which are still growing had other sources of livelihood, such as factories, educational institutions, government, industry, agriculture. Towns which were only for gathering, storing, grinding and shipping wheat have vanished.

5-6

SOCIETY VS. SCARCITY

by Bonnie Meszaros

Bonnie Meszaros is a field consultant for the Center for Economic Education at the University of Delaware, has taught grades six through nine and was the author of the Teacher's Guide for the Trade-Offs *series.*

Scarcity

Some aspects of economics can be taught at any grade level. In the primary grades this is achieved by relating economics to the children's own personal experiences and immediate environment. By the fifth or sixth grade they are able to deal with *scarcity* on a broader basis. Students quickly realize that *scarcity* goes beyond a personal level and permeates all of society. Just as individuals must choose among alternative uses of their own personal resources, societies too must make these decisions. All societies wrestle with three basic economic questions of what to produce, how to produce and for whom to produce. Upper elementary students can explore the ways different groups have answered these questions from a historical and contemporary perspective.

Goals

Students should be able to:

1. State a definition of *scarcity.*
2. Give examples of *scarcity* situations from history and the present.
3. Explain why choices are inevitable when *scarce* resources have alternative uses.
4. Analyze methods of allocating *scarce* resources in terms of who gains and who loses.
5. Analyze how *scarcity* affects the production of goods.
6. Summarize how *scarcity* affected the lives of settlers at Jamestown.

Teaching Activities

Allocation Game

This activity helps students understand that there are alternative ways of allocating *scarce* resources and that each alternative has both avantages and disadvantages.

Bring to class three items that the majority of the students might like (candy bars, pencils, posters, gum). Explain that you would like to give them away but cannot decide who should receive them. Ask the class for suggestions on how to allocate the items. List their ideas on the board. Possible suggestions might be: sharing, first-come-first-served, contest, force, auction, teacher or person in authority decides, lottery.

Assist the students in identifying the cost (disadvantages) and benefits (advantages) of each alternative in terms of who gains and who loses. Record their answers on a chart with three columns headlined "SUGGESTED METHOD, ADVANTAGES, and DISADVANTAGES". Have the students vote for the method they think should be used. Use the method that receives the most votes to distribute the items. Discuss the following:

1. Are any of you dissatisfied with the results? (A group decision usually differs from a personal decision. It does not reflect the values of each member of the group.)
2. Was this the fairest method? (Students vote for the method they think will benefit them. When they don't obtain one of the *scarce* commodities, they may be unhappy with their original choice.)
3. What are some examples where each of the allocation methods on the list is used to distribute goods in today's society? Review advantages and disadvantages in each case.

Distribution Game

Give the following information to the students. "We have just arrived in the New World. There are one hundred of us. We can expect to be here for at least a year before another ship arrives with supplies. This is not what we expected. There are many problems. Our class has been chosen to lead everyone on the ship through the first year. To provide any of the items we want requires the use of land or natural resources, labor resources, and tools, called capital resources. The total amount of resources we have to work with are summarized below.

TOTAL PRODUCTIVE RESOURCES

land	labor	capital
1,000	1,000	900

We need food, clothing, protection from intruders, shelter and tools. Our group must decide how many of each of these goods should be produced. To produce these we must choose some of our productive resources. The exact amount is shown below.

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RESOURCE ALLOCATION

wants	land	labor	capital
Food per person for one year	5	5	3
Clothing per person for one year	2	3	3
Protection for all 100 people	3	3	2
Shelter (houses) for all 100 people	5	5	5
Tools, medicine for all 100 people	1	2	2

STUDENT WORKSHEET

YOUR DECISIONS		PRODUCTIVE RESOURCES REQUIRED		
goods	Number to be Provided	land	labor	capital
Food				
Clothing				
Protection				
Houses				
Tools, medicine				
Total				

Divide the students into groups and supply each group with a copy of the Student Worksheet. Assure them that no correct answer exists. We want a recommendation that everyone in the group will accept. Before each group is ready, pressure them to finish. Explain that if this were a real situation they wouldn't have all the time they would like in making such decisions.

Ask each group to give their recommendations and explain their decisions. Write the recommendations on the board. Ask for student responses to each suggestion. This should promote some controversy since no two groups will have identical solutions. Ask the following questions:

1. What problems seem to be posed for society by the existence of a *scarcity* of resources?
2. From this activity how would you define economics and the economy? (Finding a way to allocate *scarce* resources.)
3. What questions did you have to answer in this activity? (What to produce?) You already knew how each good was going to be produced in terms of how much labor, land and capital resources were needed. None of our suggested plans provided enough food, clothing, housing, tools and protection to meet everyone's wants. How will we decide who gets each good? Have the students analyze their suggestions in terms of who benefits and who loses.

Point out to the students that they have just been struggling with the three basic questions every society must answer when dealing with the dilemma of *scarcity* and the allocation of *scarce* resources.*

Scarcity at Jamestown

Prepare a bulletin board with a sailing ship like the Mayflower and big letters saying "Sailing for Jamestown—What will you take?" Around the ship there should be either words or pictures of gentlemen, laborers (skilled workers), a doctor, a minister, carpenters' tools, farming tools, water, guns, clothes, cooking utensils, seeds, dried vegetables, salted meats, ammunition, a cow, oxen, blacksmiths' tools, flour and sugar. There also should be a box sketched on the bulletin board with the words "Activity Sheet" written on it. The Activity Sheet for use with the bulletin board should say the following: "Pretend that the Virginia Company has put you in charge of preparing for the journey to Jamestown. Your mission is to reach the New World and find gold. The ship is almost loaded. On the bulletin board is a list of all the items you still want to take. The ship is not big enough for all of them. You have room for 24 more men and five of the other items. Which items would you choose? Which men would you take? Explain your choices."

This activity also requires this reading:

"In 1607 a group of men landed and settled in Jamestown, Virginia. The Virginia Company had hired them to search for gold and other riches. The purpose of the colony was to earn a profit. When the men landed they needed many things such as shelter, protection from the Indians, and cleared land for planting crops. The large trees made the clearing of land difficult. The Indians were sometimes hostile. Swampy land was a breeding place for mosquitoes. Many men got sick and died. The supplies brought from England were quickly used up. To survive, the men needed to build shelter and find food. Grain had to be planted and wild game hunted. All of these things needed to be done soon if the men were going to live through the winter. Some of the men refused to work. Many of them searched for gold. Some had never worked for a living and had no special skills."

Distribute the reading to the students and discuss the following questions:

1. What are the *scarce* resources in this situation? (Cleared land, skilled labor, time.)
2. How does *scarcity* affect the amount of goods that can be produced? (Limits the amount of goods produced.)
3. How do you think the men should decide what should be produced? Who gets the goods? How they should be produced?
4. How do you think *scarcity* affected the lives of the men in Jamestown? Ask the students to re-examine their original list of items they chose to bring to the New World. Discuss the following:

Did you make good choices? Would you change anything on your original list? Explain why or why not. Have the students read about Jamestown, its problems and the attempted solutions in their American history textbooks. Suggested discussion questions:

1. How did *scarcity* actually affect the lives of those in Jamestown?
2. How did the settlers solve the three basic economic questions of what to produce, how to produce and for whom to produce? (Under John Smith's direction, the settlers produced those goods which would help them to survive. All men had to work and some trading for corn was done with the Indians. Smith's policy of "no work, no food" determined the distribution of goods.)
3. How does *scarcity* affect your life? (Students can easily think of examples from their personal lives in terms of money and time. At this age level they should be encouraged to draw from a broader perspective and give examples from a national and global scene.)

Adapted from an activity written by Robert Highsmith in Workshop Leader's Handbook *published by the Joint Council of Economic Education, NY, NY.*

White House Oval Office ceremony marks the public announcement of the establishment of The National Center of Economic Education for Children.

PRESIDENT CARTER ENDORSES THE NATIONAL CENTER

President Jimmy Carter heard Lesley College President Don Orton and Trustees Chairman Eliot Snider describe the purpose and goals of The National Center and commended them and the Advisory Board for their "major commitment to this long neglected area of elementary education." Following the ceremony the Advisory Board met at the Hay-Adams House and adopted a resolution that "the National Center proceed aggressively to devise and implement its plans to increase the level of economic literacy among the children in the elementary schools of the nation."

Advisory Board members include Dr. George P. Baker, Professor Emeritus, Harvard Graduate School of Business Administration and Julian M. Sobin, Chairman, Sobin Chemicals, Inc., co-chairmen; Edgar D. Aronson, Chairman, Dillon, Read International; Gerald W. Blakeley, Jr., President, Cabot, Cabot & Forbes Company; Samuel S. Dennis, III, Senior Partner, Hale and Dorr; William D. Eberle, Senior Partner, Robert A. Weaver, Jr. & Associates, former President's Special Representative for Trade Negotiations (Ambassadorial rank); Hollis G. Gerrish, President, Squirrel Brand Company; Dr. Howard Wesley Johnson, Chairman of the Corporation, Massachusetts Institute of Technology; Mrs. Edward M. Kennedy, graduate student at Lesley College; the Honorable Henry Cabot Lodge, former U.S. Ambassador to Germany, Viet Nam, Vatican, At-Large; Frederic V. Malek, Executive Vice President, Marriott Corporation; C. Charles Marran, Chairman of the Board and President, Spencer Companies, Inc.; William C. McConnell, Jr., President, Interstate Capital; Ervin Pietz, President, Barry-Wright Corporation; Ronald Rossetti, President, Nature Food Centres, Inc.; Dr. Henry Rosovsky, Economist, Dean, Faculty of Arts and Sciences, Harvard University; Jack T. Schwartz, President, Syndicate Magazines; Daniel C. Searle, Chairman, G. D. Searle & Company; William S. Sneath, Chairman of the Board, Union Carbide Corporation; Eliot I. Snider, President, Massachusetts Lumber Company; Catherine N. Stratton, Trustee, Lesley College; Robert Tonon, President, Peter Gray Corporation; C. Vincent Vappi, President, Vappi & Company, Inc.; William H. Waltrip, Executive Vice President, Pan-American World Airways, and John Donald Wilson, Chief Economist, The Chase Manhattan Bank, N.A.

The National Center will accomplish its goals through a carefully designed program whose central purpose will be to increase the interest in and the ability of educators in elementary schools to teach the concepts, skills and values that are basic if the individual is to function successfully as consumer, producer and citizen.

The National Center will be a resource providing guidance, materials, teaching strategies, training, staff, information and speakers. It will undertake research, evaluation and development of all facets of economic education for the elementary school level. Among the programs of The National Center of Economic Education for Children are a national survey of existing economic education curricula, an Awards Program to stimulate and promote curricula and materials for economic education, a three-day conference focusing on current and prospective research related to economic education for the elementary grades, and a course publication of **The Elementary Economist©**.

Permission is hereby granted to reproduce in any quantity for classroom use, in whole or in part, any portion of this publication. For other uses please contact The National Center at Lesley College.

Our appreciation to Dr. Douglas Sweet, faculty member at Lesley College, for originating the title of this publication.

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The National Center of Economic Education for Children

Vol. 1, No. 2 THEME: OPPORTUNITY COST

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DIRECTIONS

The optimist views a glass filled to the middle and pronounces it half-full. The pessimist sees the same glass and declares that it is half-empty. Which one is right? Naturally, they both are correct. The answer depends on your perspective. One side of a nickel has a very different picture than the other side. They represent two views of the same thing — a nickel. Which view you see depends on your perspective.

The economic way of thinking offers a different perspective, a way of viewing real life events that is unlike other disciplines. For example, we say that the cost of a decision, the real cost, is not the dollars you spend, but is the best alternative you might have chosen — the *opportunity cost*. When you buy a book, it becomes impossible to spend that money on a record (assume that the record was your best alternative). The real cost (known as *opportunity cost*) of the book is the record. Money is useful simply to help make comparisons between items and to facilitate exchange.

Similarly with time. The *opportunity cost* of reading a story to your class is the next best alternative way you might use that time. Each of us — teachers, parents, administrators, children — must necessarily make choices many times a day. The concept of *opportunity cost* is basic to the decision making forced on us by the existence of scarcity. Wants exceed resources and therefore decisions must be made.

The activities for children K-2, 3-4 and 5-6 in this month's issue of **The Elementary Economist©** show many ways your class can learn this useful concept.

Stanley P. Mengel
Director

The National Center Awards Program

It is the central purpose of The National Center Awards Program to increase the number of school systems and teachers who include economics as an integral part of the elementary school curriculum and to stimulate the production of quality teaching materials and learning tools. To achieve this purpose, the program is designed to share outstanding achievements in the following strategic areas:

Pre-Service Teacher Training Division: Eligible applicants will be either 1) those who teach social studies and/or general methods courses to pre-service teachers for the elementary school level or 2) those who teach social studies courses which include preparation for pre-service teachers to teach economics in the elementary school. Entries may consist of materials describing courses of study, workshops, conferences and seminars, research, administrative procedures and techniques, and communications

In-Service Teacher Training Division: Eligible applicants will be *school systems* which conduct programs for elementary school teachers to improve the teaching of economics. Entries may consist of materials describing courses of study, workshops, conferences and seminars, research, administrative procedures and techniques, and communications.

Teaching Materials Division: Eligible applicants will be organizations that produce and publish materials for teaching economics in the elementary school curriculum.

Awards of $5,000 are being offered for First Prize in each division and $100 is being offered to each entrant who qualifies for an Award of Distinction in each division.

Dr. George L. Fersh is the Senior Consultant to the Director for The National Center Awards Program.

For entry forms or more information write to:
Stanley P. Mengel, Director
The National Center of Economic Education for Children
Lesley College
29 Everett Street
Cambridge, MA 02238

K-2

OPPORTUNITY KNOCKS

by Linda Monteverdi Kuehn and Beth Gurian Saffer

Linda Monteverdi Kuehn and Beth Gurian Saffer are second grade teachers in the Rush Henrietta School District, Rochester, NY. In 1976 their entry, "The Popcorn Factory", placed first in the International Paper Company Foundation National Awards Program for the teaching of economics.

Opportunity Cost

You might think that *opportunity cost* seems like a difficult concept for K-2 children, but you will be amazed at how quickly the children will want to include it in their everyday vocabulary. Since decision-making is part of our daily experiences, children need to understand why it is important to make *wise* decisions. Time, money, wants and value judgements are all involved in decision making. As students participate in these activities they will begin to analyze their alternatives more carefully when given a choice. They will become more aware of the value of time and money, the importance of setting priorities, and the consideration of their own personal value system.

Many topics can be extended to include economic concepts. Since *opportunity cost* is present in every decision a person makes, this concept can easily be introduced and discussed all year. For example, when discussing community helpers, introduce the concept of producer and the *opportunity cost* of choosing a career. Easily modified to meet the needs of students, the activities listed can and should be incorporated into the other curricular needs of the classroom.

Goals

As a result of the following activities the children will be able to:

1. Recognize that *opportunity cost* is the choice you give up so that you can have your first choice.
2. Conclude that *wise* decisions have to be made because there is never enough time or money to do everything you want (scarcity).
3. Make a decision when given several choices and explain their reasons.
4. Give examples from their own experiences that demonstrate the concept of *opportunity cost*.

Teaching Activities

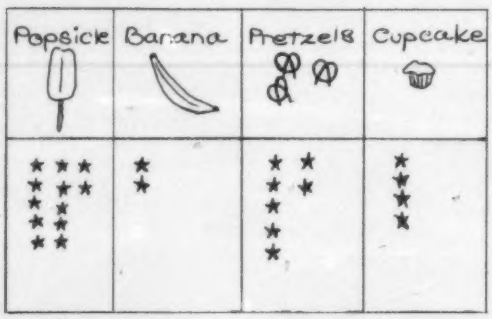
These activites do not need to be done in a specific order. However we suggest that you begin with **Thumbs Up, Thumbs Down** as an introductory activity. We have included in parentheses the skills that will be emphasized with the development of these activities.

1. **Thumbs Up, Thumbs Down** (a values strategy, borrowed from a workshop given by Dr. Sid Simon)

The teacher presents a situation and the children either agree (thumbs up) or disagree (thumbs down). All answers are acceptable. Some sample situations are: I want a new bike but the car needs new tires. Daddy should choose to buy new tires. I agree/disagree; and, My brother wants to play with my toys but I don't always want to share them. I should share. I agree/disagree. Discuss with the children their decisions emphasizing the following points: A) When making a choice, the *opportunity cost* of what you choose is the next best opportunity you did not choose; B) decisions have to be made by setting priorities and making value judgements; C) people are different and can have different wants (and therefore different *opportunity costs*).

2. **Lunch Line** (Graph reading, nutrition and health)

Cut out food items from magazines and paste them on poster paper in graph-like form. Tell the children that the lunch line is having a free snack today. What will they choose? Let children come up one at a time and place a gummed star under their choice. Several questions can be derived about the completed graph, i.e., how many students are in class today, what is the most popular choice of snack, what is the second favorite choice, which snack did you choose, which snack did you give up (your *opportunity cost*), and then children can discuss reasons for their choices.



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3. **I Can, But I Can't** (creative drama)

The teacher prepares picture task cards (useful to non-readers as well as readers), each card showing two opportunities, i.e., fishing or watching cartoons. The child picks a task card, makes a choice and then pantomimes both by first saying "I can . . ." (acts out fishing), letting classmates guess the choice. Then the child says "But I can't . . ." (acts out watching cartoons) and the class will guess the alternative not chosen. Classmates may ask questions about the choice and the *opportunity cost* of that choice. This activity stresses the *opportunity cost* concept that something must always be given up when making a choice.

4. **10¢ Shop** (math, counting money, making change)

The teacher prepares a simulation of a shop using actual items, i.e., candy bars 10¢, pencils 2¢, sucker 4¢, balloon 3¢, yoyo 10¢. The children are told that they have 10¢ to spend. They may decide whether to spend the 10¢ or not to spend it at all. At this point saving can be introduced as an alternative choice. Saving can be treated as one way of spending money. You purchase a savings account. The children should identify the *opportunity cost* of each purchase, i.e., what they would have bought instead. They should add up the price of each item chosen, show the total amount spent and how much change they have left.

5. **The Shopping Center** (math, counting money, making change, values and reading)

This is an extension of the **10¢ shop** activity utilizing a variety of stores. Use large poster board with the name of each store on the roof. The teacher can set it up blank allowing the children to cut out pictures from magazines and put them in the appropriate store, thus experiencing the decision making process a storekeeper undergoes when deciding which items to offer for sale. Once the mall is complete and the reasons for choosing the particular merchandise discussed, set up a toy cash register with play money. Make task cards that indicate the amount of money the child has to spend *and* a situation requiring a decision, i.e., you saved $5 for a bicycle but mother's birthday is tomorrow. A child goes to the cash register, picks a task card, takes the money indicated on the card and then goes shopping. Once the decision is made, the child tells the class the choice and the *opportunity cost* of that choice (the best alternative not chosen).

6. **Crystal Ball Tells All** (art, career education)

Children draw a picture of what they want to do when they grow up. One at a time, they share this picture with the class through a magic crystal ball. Ask the children to share their second choice (their *opportunity cost*) and why they didn't choose it. How to make the crystal ball: Cut a 2 inch wide circular frame of cardboard, about 20 inches in diameter, and cover it with clear plastic wrap. Make a base of black construction paper or cardboard to hold the ball. Children hold their pictures behind the "crystal ball" frame.

7. **Opportunity Knocks** (listening, following directions, imagination)

One child is chosen to stand at the center in the front of the room. This child is called Ms./Mr. Choice Maker. Two others are asked to stand at each corner in the front of the room. They are each called Ms./Mr. Opportunity. The one on the right will knock on the Choice Maker's "door" and the Choice Maker will answer, "Who's there?" The person who knocked will respond, "It is I, Ms./Mr. Opportunity. I have an opportunity for you." The child then makes up an opportunity for the Choice Maker, for example, a trip to the zoo. Then the other Ms./Mr. Opportunity will knock in the same manner as the first and offer a different opportunity to the Choice Maker. Now the Choice Maker has to make a decision and tell the class which opportunity is picked. The entire class will then ask the Choice Maker, "What was your *opportunity cost*?" The Choice Maker tells what was given up and why the other opportunity was not chosen. The chosen Ms./Mr. Opportunity will be the next Choice Maker.

P.S. Remember, teachers, the *opportunity cost* of not choosing to cover the concept of *opportunity cost* with your students is missing out on many fun filled activities that increase the reasoning abilities of the students. So think what you have to lose!

To receive a *free* subscription to **The Elementary Economist©**, please your name, school system and home mailing address

We welcome all comments and suggestions.

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3-4

DECISIONS, DECISIONS

by Berna Jo Gayler

Berna Jo Gayler is a third grade teacher in Las Vegas, Nevada, and an assistant instructor of Elementary Economic Education at the University of Nevada. She is a recipient of state and national awards for the teaching of economics.

Opportunity Cost

Every day we make dozens of decisions — what to wear, what to eat, how to spend money, etc. We are often unaware of our decision making and do not consciously think about our alternatives. When making decisions, we use time, money and other scarce resources. Once our decision has been made, the opportunity to use these resources in any other way has been lost. Opportunity lost is *opportunity cost*. The *opportunity cost* to a person watching "Mork and Mindy" is another television show that might have been viewed. The *opportunity cost* to a child buying a candy bar is the soda pop that might have been purchased. The *opportunity cost* to a student using scissors, paste and paper to make one art project is another art project that might have been made.

Goals

The students will:

1. Make logical decisions by considering their alternatives and *opportunity cost*.
2. Recognize that the choices people make are determined by their values, tastes, incomes and the prices of goods.
3. Understand that the price of an item is a measure to help determine the *opportunity cost*.
4. Understand that people obtain the most satisfaction from their choices about how to use their scarce resources when they consider the *opportunity cost*.

Teaching Activities

The following activities are grouped according to the scarce resource emphasized. The curricular areas involved are listed.

Time

A. Give students a choice of two games to play during physical education. Have them discuss and vote on their choice. Discuss their *opportunity cost*, and what resource is scarce (time).

B. If classroom jobs are assigned, discuss what opportunity is missed when time is spent completing each task. What else could each student have done with the time? What would be the second choice? What resource was scarce? (time). What was the *opportunity cost*?

C. Reading: Before free reading time discuss with students their choice of books to read. Why did they choose the particular book they did? What did they like about it? What would have been their second choice? What resource was scarce? (time). What was their *opportunity cost*?

Money

A. Creative writing: Have students write about the following: "Your grandmother sent you $20 for your birthday. How would you like to spend it? Why? What would be your first choice? What would be your second choice (*opportunity cost*)?" Have the children identify that their scarce resource is money.

B. Math: Obtain several merchandise catalogs. Give the students a set amount of play money. Have them "spend" their money by cutting out and pasting the items they want on a piece of paper. Note that saving money is one alternative choice. Have them calculate the amount spent. Have them do the same thing on the other side of the paper with things they would have bought if they had not spent their money on their first choices. Have them title this side "My Opportunity Cost." Discuss what resource was scarce (money). In this case, the *package* of items chosen is being compared to the second-best *package* of items.

Other Resources

A. **One side or the other:** This is an activity many, including teachers in economic education, have enjoyed. Distribute a ditto sheet on which a simple cut-out and put together pattern has been drawn on both sides. Use a different pattern for each side, making sure that when one side is cut out the other side will be unusable. Pictures of food, toys, cars, etc. can be used to stimulate discussions of things people want. Coloring books can be used for pattern ideas. Have students state their choice of what they will make, their *opportunity cost* and what resource is scarce before beginning.

B. **My sticker or yours?** You will need at least three different sticker designs with enough total stickers to give one to each student. Divide the class into groups of four or five. Show the students the sticker designs and tell them they will each receive a sticker which they may trade if they wish for the sticker of another child in their group. They will be given five minutes to trade. Distribute stickers randomly (one to each child) making certain that each group has at least three different stickers. Give the students five minutes to trade. Then lead a discussion including these questions: Did everyone like the same sticker best? Why? (No, different children have different tastes.) Why did you trade your sticker? Why did someone trade with you? (Trading will take place only if *both* parties will become more satisfied.) What was your *opportunity cost*? What did you give up in order to have the sticker you now have? (If they traded, their *opportunity cost* is the sticker they originally had. If they did not trade, their second favorite sticker is their *opportunity cost*). Did anyone not trade? Why? (The *opportunity cost* to them of trading was too high.)

C. **Story Search:** Have students look for stories in their readers, library books, newspapers or other news media about choices people have made. Have them read their story and see if the class can identify the resources the people used and their *opportunity cost*.

D. **The Great Picnic Trade:** Make food cards on poster board as follows:

5 "cupcakes" cards
5 "hamburgers" cards
5 "juice" cards
5 "ketchup, mustard, and pickles" cards
5 "potato chips" cards

Pictures for the cards can be drawn, cut out from magazines or not used at all. The cards may be color coded but need not be. They should all be the same size. Divide the class into five groups and number them from one to five. Give Group 1 the cupcakes cards, Group 2 the hamburgers cards, Group 3 the juice cards, Group 4 the ketchup, mustard, and pickles cards, and Group 5 the potato chips cards. Then tell them the following: "Each group is preparing to go on a picnic. Your family has given you the foods on your cards. Group 1 has cupcakes, Group 2 has hamburgers, Group 3 has juice, Group 4 has ketchup, mustard, and pickles, and Group 5 has potato chips. Each food card is worth enough of that food for one whole group. That means that if a group has one hamburger card, every child in that group has one hamburger. If a group has two hamburger cards, every child in that group has two hamburgers.

"Your group will have four chances to trade your food for some food another group has." You do not have to trade at all. Your group has five minutes to decide what, if anything, your first trade will be. Only whole cards may be traded. Pick one person to be your group's trader who will try to make the trade with another group. The trader can only make the trade the group has chosen.

"You may now begin. You have five minutes to select your trader and decide what to trade for the first round." Let the children determine their own rules for trading, i.e., how many ketchup, mustard, and pickles cards should we trade for one cupcakes card? Allow these exchange rates to evolve naturally; do not impose any rules on the children.

After five minutes, stop the discussions and tell the class, "The traders will now have five minutes to make their trade. The whole group must agree to a trade before it is made and you do not have to trade anything. Begin."

After five minutes, stop the trading and record each group's trade on the blackboard. Ask each group what their *opportunity cost* (what they gave up) was for the trade. Record this on the blackboard also.

	I TRADE - O.C.	II TRADE - O.C.	III TRADE - O.C.	IV TRADE - O.C.
Group 1				
Group 2				
Group 3				
Group 4				
Group 5				

Give the groups another five minutes to determine what to trade for Trade II, and five minutes to make the trade. Record as before. Repeat this process for Trades III and IV.

Record what each group has at the end on the blackboard and collect the cards. Lead a discussion including the following questions:

1. Was your *opportunity cost* different for Trade I and Trade IV? Why? (As the situation changes, your *opportunity cost* can change.)
2. Did any group choose to not trade? Why? (The *opportunity cost* to them of trading was too high.)

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We welcome all comments and suggestions.

The National Center of Economic Education for Children, Lesley College, Cambridge, MA 02238

TRAVEL LOGS

by Susan Naimon

Susan Naimon has taught fifth and sixth grades in the Shorewood, Wisconsin, Public Schools for eleven years and has won an award for excellence in economic education from the Wisconsin State Council on Economic Education.

Opportunity Cost

Children and their families face decisions each day as they attempt to allocate their resources in a satisfactory way. Children's understanding of decision making processes and their consequences can be improved by introducing the concept of *opportunity cost*. Children become aware of their alternative choices when placed in learning experiences which require decision making.

This unit is presented in a learning center format containing a series of tasks appropriate for pupils to pursue alone or in small groups. Most activities can be completed in 45 to 60 minutes. The notes below will demonstrate how to prepare an attractive display, gather appropriate materials and prepare the charts. The learning center tasks can be displayed in the center or duplicated so that each student can have a copy. Teachers should feel free to change the details in the tasks to increase the relevancy to their pupils. The skills involved and the materials needed are listed for each activity.

CHARTS FOR THE LEARNING CENTER

CHART I
At This Center, You Will:

- Learn to understand the concept of *opportunity cost*
- Learn an efficient way to solve problems and make decisions
- Plan and keep a record of a vacation trip for your family
- "Purchase" some things you'll need for the trip
- Participate in a White Elephant Auction

CHART II
Opportunity Cost — The Second Best Alternative Which Is Given Up When You Make A Choice Between Alternatives

Goals

The students will:

1. Develop an understanding of the concept of *opportunity cost* and how it affects decision making.
2. Learn how to use a problem solving matrix to evaluate alternatives, make a wise decision and recognize *opportunity cost*.
3. Learn how *opportunity cost* is related to other economic principles such as scarcity, supply and demand and market clearing price.

Teaching Activities

1. **Allocation of limited resources.**
(Decision making, language arts)
Materials: Problem solving matrix
Task: "You need three to five students to work at this center. Your school PTA has contributed $35 to your classroom. Your group is to select at least four alternative ways to spend the money and, using the problem solving matrix, evaluate the alternatives to determine if they meet the criteria. Do not change the criteria unless everyone in your group agrees to the change. Your task is to complete the matrix by placing pluses and minuses in the appropriate squares. When you have selected the best alternative, work together to write a paragraph on the back of the paper explaining your group's choice. Also write what your group's *opportunity cost* was: that is, the second best alternative you agreed to give up so that you could have your first choice."

Problem Solving Matrix*

Directions: Evaluate each alternative way to spend the $35.
Place a plus (+) in the square if the criterion is met.
Place a minus (−) in the square if the criterion is not met.

ALTERNATIVES	CRITERIA FOR SPENDING PTA MONEY			
	Useful to most people in classroom	Maximum cost of $35 including tax & shipping	Non-consumable, will last at least 1 school year	Has an educational value

*Borrowed from *Trade-Offs' Manual*, Agency for Instructional Television, 1978

2. **Opportunity cost of alternative travel plans.**
(Math, reading, language arts)
Materials: Maps of the United States, Florida, and Triple A and Best Western Tour Books are usually available free from motels and Triple A agencies. Menus from popular nationwide restaurants may be acquired from the home office of the restaurant if the request is made on school stationery. Make charts of the current price of gasoline, estimated miles per gallon for certain cars, estimated number of miles travelled each day, airfares for adults and children to Disney World and entrance fees to Disney World.
Task: "Your family has one week, seven days and seven nights, in which you will all be free from school and job demands. You have already agreed that you want to go to Disney World.

A. Compute the cost of travelling to the park by car and by air. Remember to include the cost of motels, gas and meals in the car trip cost.
B. Compute the cost of the motel or hotel stay in the Disney World area. Remember that the length of your stay will be determined by how much time you will use travelling.
C. Compute the cost of your family's time in the parks, again keeping in mind that the number of days there will depend on the number of days used for travel. Estimate the daily cost of meals.
D. Compute the total cost of the trip by car and by air.
E. Write a one-page summary describing your decisions and the *opportunity cost* of those decisions. Note that the *opportunity cost* of these decisions is the second best alternative you considered and is *measured* by the dollars it would have cost."

3. **Personal Opportunity Cost.**
(Math, problem solving)
Materials: several catalogs and their order blanks.
Task: "You have $50 to spend preparing for your trip to Disney World. Spend 30 minutes listing all the things in the catalog you would like for the trip regardless of price and use another 30 minutes to complete an order blank, staying within your $50 limit, including the sales tax and shipping charges. When you are finished, write a few sentences on the back of your order describing the *opportunity cost* of your decisions. Remember that your *opportunity cost* for any decision is the next best alternative you would have chosen."

4. **Travel Log**
(Language arts, creative writing)
Task: "Create an imaginary log or diary of the trip you planned to Disney World. Write at least one-half page for each day of the week. Describe your travel time and experiences, the places at which you stayed, the food, the attractions you visited on the trip and in Disney World. In each entry comment on at least one choice made by yourself or members of your family and its *opportunity cost* (the next best choice you gave up was your *opportunity cost*). If you have never been to a Disney Park make up the rides and sights to illustrate the way you would like them to be when you finally do make that wonderful trip."

5. **White Elephant Auction**
(Decision making, math)
Materials: auction items, envelopes, play money.
When you begin this unit on *opportunity cost*, ask the children to bring in "white elephants" from home: items which are still in good condition, but which their families no longer find useful. Keep the items on display in the classroom during the time you spend on this unit. Tell the children they will have an opportunity to "purchase" some of the items with play money at the "white elephant auction."

Prepare a sealed envelope for each pupil containing amounts of "money" from $15 to $25 and distribute randomly on the morning of the sale. Before the sale begins, arrange for someone to act as a record keeper for the sale to keep track of the items sold, the buyers and the amounts paid for each item. The teacher may act as the auctioneer, setting the minimum bids and accepting whole dollar bids only.

At the end of the auction discuss the experience with the class:

1. How did the supply of various items affect your purchasing plans?
2. What can you say about the desirability of items which were scarce? Of items which were plentiful? How did these conditions affect the market clearing price: that is, the price at which demand dropped off?
3. How did your limited resources affect your purchasing plans and purchasing power?
4. What was your personal *opportunity cost* in this exercise?

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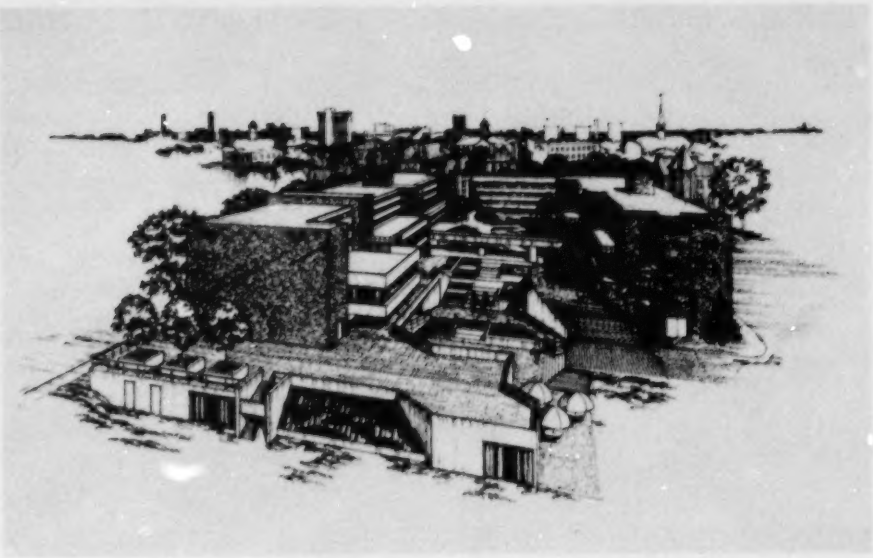
We welcome all comments and suggestions.



Lesley College campus with proposed building for The National Center of Economic Education for Children in left foreground.

WHY LESLEY?

Lesley College, located in Cambridge, MA, is the largest private institution in the nation that specializes in education of teachers for the elementary grades, with 800 women students enrolled in the undergraduate school and full and part-time enrollments in excess of 4,000 in the Graduate School. Recognition of its leadership in this field is shown by its increasing number of foreign students and by its selection for study as an exemplary model by an international consortium of teachers' colleges (IMTEC). It was also included as a case study of successful management at the Harvard Graduate School of Business Administration.

Courses in economics have long been a degree requirement for Lesley students. In addition, they may elect "Teaching Economics in the Elementary School" as a degree specialization.

Lesley College stresses classroom experience. Over 100 cooperating school districts accept Lesley students in their classrooms as early as their freshman year. This on-site training continues throughout the undergraduate program and contributes strongly to Lesley's reputation as an innovative, effective educator of teachers. The professionalism of its graduates is proven by its placement rate: 92 percent of its graduates seeking employment were placed in teaching or related jobs last year, as compared to a national average of 43 percent.

Experience gained in designing courses and placing teachers has convinced Lesley College that only a total commitment to the area of economic education will have measurable national impact. It is a commitment the College and Board of Trustees have chosen to make. One million dollars has been pledged by individual board members to provide an initial endowment for The National Center program.

Because of the strong network of over 100 cooperating school districts in New England and the four independent schools the college operates, Lesley is uniquely equipped to sponsor The National Center of Economic Education for Children. These schools and other selected school systems throughout the country will participate in pilot programs and in the evaluation of new curricula and materials. Lesley College is capable of encompassing the entire spectrum of tasks which must be performed successfully if widespread economic education in elementary schools is to become a reality.

THE NATIONAL CENTER

Year I Program:

The National Center of Economic Education for Children will promote the growth and development of quality programming for children in several key areas. Among the activities of The National Center in its first year will be:

- National Survey — An extensive search is underway which will result in the first comprehensive listing of individuals and programs dealing with elementary economic education.
- Research Conference — The National Center will sponsor the first annual research conference bringing together persons with demonstrated expertise in elementary economic education research.
- The National Center Awards Program — Please see page one.

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The National Center of Economic Education for Children

THEME: PRODUCTION, SPECIALIZATION

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DIRECTIONS

This year **The Elementary Economist©** has discussed scarcity (No. 1) and opportunity cost (No. 2). The study of economics begins with the concept of scarcity. Since human wants exceed the resources to satisfy them, decisions must be made. An understanding of opportunity cost provides assistance in evaluating these decisions and considering alternatives. This concept shows that the real cost of any decision is the best alternative decision that could have been made.

Production and *specialization* are the topics of this issue. Now we are going to consider the process of transforming resources into consumables. *Production* can result in either a good (a tangible item) or a service (haircuts, window-washing, medical care). Both goods and services are measured when calculating the output or *production* of a society. The fact that a good is tangible does not make it more important than an intangible service.

Specialization allows people to produce more per unit of time by increasing their skills at a particular function. While *specialization* is sometimes negatively associated with routine factory work, it has also created tremendous freedom for individuals to pursue occupations utilizing their interests and abilities.

This issue of **The Elementary Economist ©** presents methods by which children can understand the roles of *production* and *specialization* in the adult world by first understanding it in their world.

Stanley P. Mengel
Director

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TEACHING IDEAS WANTED!

As we prepare **The Elementary Economist©** for the 1980-81 school year, we wish to encourage you to send us: single or multiple teaching activities, explanations of original games or simulations, word searches, puzzles, riddles, cartoons, bulletin board ideas, parent/child projects, list of useful resources, etc. You may send in work done by adults and/or children.

Materials sent to us will not be returned unless prearranged. Please include and label photographs, maps, charts, or other graphic materials that illustrate your ideas. Honorariums will be paid for materials published.

Subjects and Deadlines:

The economic concepts that will be included in **The Elementary Economist©** in the 1980-81 school year are listed below. Material pertaining to these or other economic concepts can be submitted at any time, however, materials received by the dates listed below will have the greatest chance for publication.

SUBJECTS	DEADLINES
Demand, Consumption	August 1, 1980
Supply, Production	August 1, 1980
Market Prices, Allocation	September 1, 1980
Capital, Investment, Productivity	September 1, 1980
Wages and Profit	October 1, 1980

Send to:
Stanley P. Mengel, Director
The National Center of Economic Education for Children
Lesley College
29 Everett Street
Cambridge, Massachusetts 02238

ROMPER ROOM

The National Center of Economic Education for Children has taken a leadership role, in conjunction with the Maryland Council on Economic Education, in promoting economic education for children by contracting with Romper Room Enterprises, Inc. to co-produce a series of at least fifteen economic education segments. The series is designed to teach important economic concepts and will be filmed in various parts of the United States. The segments will be shown throughout the 1980-81 program year, and repeated during the following two years.

Romper Room is the oldest children's television show with a weekly audience of one and one-half million children.

WHO DOES WHAT?

by Susan Hay and Jonnie Newcomer

Susan Hay has taught primary grades in the Rialto Unified School District in California for ten years and is an assistant at the Center for Economic Education at California State University, San Bernadino. Jonnie Newcomer is presently a second grade teacher in Rialto, California. Both of their classes have received recognition for their economic social studies unit from the local newspaper, television station and "Early Years" magazine.

Production and Specialization

Everyone is a consumer of goods and services and the *production* of these goods and services employs many people. Even little children are consumers of food, books, toys, medical care, haircuts and clothes. Primary age students need to be aware of the *specialization* involved in producing goods and services. Because we can't all produce our own food, build our own homes, and weave our own clothes, we are dependent on others for many things. *Specialization* takes into account the use of differing abilities and interests to provide a higher quality product using the same resources. Children are fascinated by discovering how to make things and by how something works. Teachers can take advantage of the K-2 child's curiosity by exposing the child to important economic concepts. *Production* and *specialization* are all around us. Children can be taught to notice and use *specialization* techniques to produce many goods and services such as arts and crafts projects, plays and puppet shows.

Goals

After experience with *production* and *specialization* the students will:

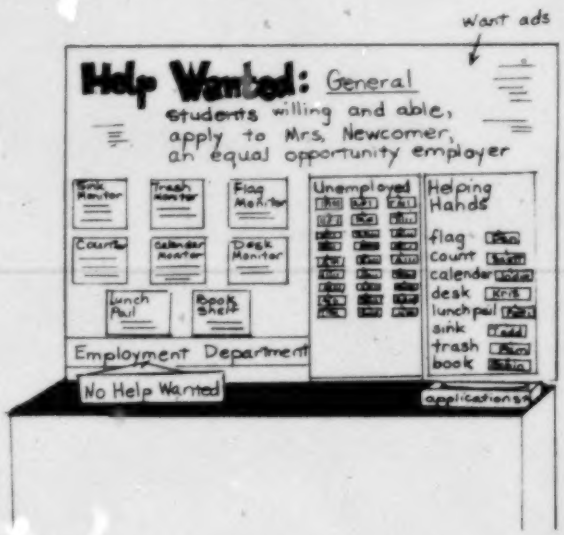
1. Recognize the advantages of *specialization* along with the disadvantages of the interdependence it causes.
2. Recognize that many processes are involved in the *production* and/or marketing of even simple goods such as apples, cookies and greeting cards.
3. Understand the following vocabulary: *production*, *specialization*, manufacture, product and assembly line.
4. Recognize and identify the three factors of *production*: land or natural resources; labor or human activity; and capital or buildings, machinery and man-made goods used for further *production*.

Teaching Activities

1. **Who Does What?** Discuss and make a chart of the kinds of work family members do at home, such as empty the trash, do the laundry, feed the pets, vacuum the floor, cook the food, etc. Make a list of who does each job. Note that each family member is a specialist because it is more efficient. (Take dishwashing as an example. What would happen if everyone did her/his own dishes? What if everyone chose the same time? Could everyone in the family reach everything? Who would wash the pots and serving dishes? How does your family organize dishwashing?) Make a book showing each family member's job. You may wish to read the story of "The Little Red Hen" to illustrate the steps involved in *production*.

2. **Who Does What At School?** List several jobs on the chalkboard, such as erase boards, empty the trash, dust, clean the sink, straighten the book shelves, etc. If you're brave, ask all the children to do all these things at once. If you're like us, you'll assign several children to demonstrate or discuss the need for *specialization*. Now divide the jobs and see how much more efficient it is to specialize.

3. **The Equal Opportunity Employer.** This activity provides an example of the *production* of services rather than goods. Make a help wanted bulletin board mounted on newspaper want ads. (See sketch below.) Describe the specialized tasks needed to maintain your classroom. Have students fill out simple job applications requiring name, date, address, job they are seeking and previous experience. Students' names are posted under headings "Unemployed" and "Employed." An extension of this activity could be to start a classroom economy and pay employees.



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4. **Who Runs the Schools?** Visit and interview all school employees. Find out upon whom they are dependent to get their own jobs done. What if the principal had to do the work of the secretary, nurse, custodian, librarian, teachers, gardeners and bus drivers? How efficient would the principal be? Why is each employee a specialist? Define the student's job. Why are workers better at their own jobs? Draw a picture of the school employees and their special jobs. Make a book or chart of these specialists and their jobs. Discuss the *production* of services through *specialization* in the school.

5. **The Custodian.** Arrange to have the custodian leave the room uncleaned or to leave some task undone. Discuss what happens if one specialist in an interdependent community does not do his/her job. *Specialization* requires that all workers do their jobs.

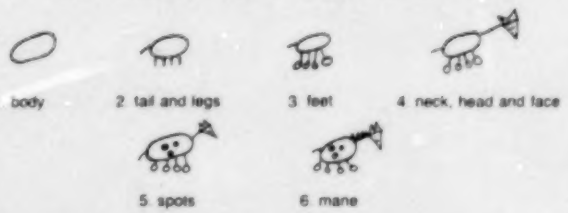
6. **Too Many Chiefs.** Play Squirrels in the Trees, Cops and Robbers or tag. What if no one will be a tree or squirrel? Can everyone be the cop? Can you play tag if no one will be It? In order to play a game or to have a functioning society, *specialization* must occur.

7. **Whose Hat?** Fill a box with different occupational hats. Include a hard hat, nurse's cap, baseball player's cap, firefighter's helmet, police officer's hat and a football player's helmet. Choose different children to role play the various occupations. Have them tell the class what they do best and the skills they need to do their jobs. The children may want to list their parents' occupations. Show with a chart or chalkboard how families in a community are dependent on others for goods and services due to *specialization*. The children can draw and write about a career they might wish to pursue.

8. **Somebody Goofed.** Make a list of community specialists such as barbers, doctors, bakers, firefighters, farmers, truck drivers, etc. Illustrate their jobs and discuss how *specialization* is involved. What would happen if you went to the wrong specialist? Would you let a doctor sew your clothes? How did a firefighter become skilled at his work? What did the secretary need to learn to be a specialist at that job? Would a dentist sell toys? Would a baker sell books?

9. **That's Impossible.** Make a book showing apples on trees, being harvested, being transported to the packing house, being sorted, being processed, being canned as applesauce, being delivered to the store and being purchased by you. Who did each job in the *production* process? Why didn't the farmer bring the apples to your house? Why didn't he make and can his own applesauce? *Specialization* occurs at each step; workers become skilled at their particular jobs.

10. **"Gnurble" Assembly Line.** Break the class into teams of about six students each. Assign each group to produce as many pictures of a "gnurble" as they can in one minute. The pictures must be standardized (the same). The groups probably will not be able to achieve this goal. How many were made? Next set up assembly lines with these stations:



Stack the finished pictures. How many were made this time? Compare results. Help the children to discover increased *production* and improved standardization. How is *specialization* involved?

11. **Potato Prints.** Make potato print greeting cards using an assembly line *production* procedure. Perhaps each line could use a different artistic theme, such as flowers, space ships, etc. Discuss the advantages (increased productivity, standardization) and the disadvantages (boredom, lack of personal pride in work) of an assembly line. How is *specialization* involved?

12. **What Does It Take?** Discuss the factors of *production* (land, labor and capital), possibly using a flannel board or simple drawings. Have children cut out pictures from magazines to identify the three factors of *production*. Make word and picture cards of specific examples of factors of *production*. Have the children draw cards from a jar. They must identify the factor of *production* in order to keep the card. The object of the game is to get as many cards as possible. The children can also use these cards to play "Go Fish". (Example: I am looking for a tool.)

13. **What's Cooking?** Discuss the problems involved if each student were to mix and bake only one muffin at a time. This would surely cause frustration and possibly take the class several weeks. Next have the class bake a batch of muffins. Using *specialization* and division of labor, assign one child to each step of the *production* process. Discuss these questions: Which method is easier? Why? Is everyone equally good at all the tasks involved? If you concentrated on one job, would you become skilled at it? Would it become boring? What are the advantages of each person manufacturing a product from start to finish? (personal satisfaction from work). What are the benefits of *specialization?* (increased *production*). What factors of *production* were used in this activity?

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MASS PRODUCTION: AN ASSEMBLY LINE EXPERIENCE

by Diane Greene

Diane Greene is a curriculum specialist in career education for elementary grades for the Akron, Ohio, public schools. As a second grade teacher she won a first and second prize award, primary division, in the International Paper Company Foundation Awards Program conducted by the Joint Council on Economic Education, NY, NY.

Production and Specialization

Introducing children to the world of *production* and *specialization* is a good way to have students become involved with economics and decision-making.

Specialization and division of labor take advantage of the special qualifications of individuals. By participating in this activity students can develop an understanding of *production* and gain knowledge about the interdependence of workers, career choices and the world of work. The Chinese proverb, "I hear and I forget; I see and I remember; I do and I understand," provides a rationale for doing this unit on *production* and *specialization* which can be as short as one day or as long as a year depending on the depth of economic understanding one wishes students to acquire.

Goals

After participating in this "hands on" *production* activity, the students will:

1. Be able to discuss the benefits and drawbacks of mass *production*.
2. Be able to explain the terms "interests and abilities" and be able to relate them to choosing a job.
3. Learn that *specialization* and division of labor enable more efficient use of time, materials and skills.
4. Understand the concept of what to produce, how to produce and for whom to produce.
5. Understand and be able to explain the relationship between productivity and interdependence of workers.
6. Understand the factors of *production:* land (natural resources), labor (human activity) and capital (e.g., buildings and machinery), and how they are necessary for *production*.

Teaching Activities

An Assembly Line Experience

Throughout the following *production* activity and discussions, the teacher should guide the children to an understanding of the concepts outlined in the above goals. These experiences will grant them a greater understanding of *production* and *specialization* in society.

1. Discuss students' roles in society as consumers and producers. Read the class a story relating to *production* and/or *specialization* (e.g., *Come to Work With Us in a Toy Factory*, Wilkinson, Jean & Ned, Milwaukee, Sextant Systems, Inc., 1970) or show the class a film, "Why People Have Special Jobs: The Man Who Made Spinning Tops" (Learning Corporation of America), or any other film/filmstrip relating to *production, specialization* or division of labor. If time permits, a speaker could be invited to talk about starting a business or a field trip could be taken to show the class an assembly line.

2. Choose a product and detail all the jobs necessary for *production*. For a short activity the teacher should pick the product relative to the specific economic concepts to be taught, such as interdependence of workers, quantity vs. quality, etc. For a more extensive activity, the class can list several alternatives and conduct a market survey before determining the final product.

3. After the product is chosen and the jobs detailed on the board or a chart, discuss the various jobs. Have the students consider their interests and abilities relative to the work tasks and complete the Check List below. A few examples of jobs are: assembly line workers, sales clerk, record keeper, supervisor, inspector and artist (design trademark and advertising layout).

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CHECK LIST

1. I would rather work
   - alone_____
   - with one other person_____
   - with a few other people_____
   - with many others_____
2. I like
   - making things_____
   - showing others how to make them_____
   - checking after the item is finished_____
3. I would enjoy
   - preparing the item to be sold_____
   - selling the item_____
4. I would rather work
   - with my hands_____
   - with my brain_____
5. I would rather
   - draw posters_____
   - make announcements_____
6. I would rather work with people
   - who talk a lot_____
   - who talk only a little_____
   - who are quiet_____
7. I think it is most important
   - to cooperate_____
   - to work very quickly_____
   - to work very carefully_____
8. I would rather
   - work on the product_____
   - clean up afterward_____

4. Next have the students complete a job application. An example follows. Explain that job qualifications and extracurricular activities can be things done at home, at camp, etc., which may be similar to the jobs for which they are applying.

Name_____
Address_____
Telephone_____
Job applying for _____
1st choice: I would like to be a_____
because _____
_____
2nd choice: I would like to be a _____
because _____
_____
3rd choice: I would like to be a _____
because _____
_____
Qualifications for these jobs _____
_____
_____
Education _____
Other schools attended _____
Extracurricular activities _____
_____

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5. After students have completed the job applications, have an adult who the students do not know well interview them for the position for which they applied. The job interviews should be as realistic as possible and may include asking the students to perform a task (such as making change) necessary for the job.

6. Assign jobs and begin *production*. The teacher can supply needed resources (materials) or stock may be sold to the children and their families to provide capital for purchase of materials necessary for *production*. If the product is to be sold, advertising should be going on at the same time as *production*. Advertising can be posters, announcements over the school public address system, flyers, brochures or news articles given to teachers to share with their classes.

7. After *production*, have students draw pictures of all the steps involved in making the product. Have the students label the pictures and write descriptions for each one. Discuss and verify students' understanding of the economic concepts.

Have the students discuss the interrelationships of the tasks and role play the correct and incorrect ways to work on an assembly line. For example, talking and not doing the job, annoying the next worker or not paying attention to one's task would all be detrimental to *production*. Helping a co-worker, using tools carefully, working quietly and as quickly as possible, and paying attention to details would help *production* and productivity.

8. As a culminating activity for *production*, students can be asked to complete a reaction sheet. An example follows:

REACTION SHEET

Name _____ Date_____
1. Did you like your job?_____ Explain. _____
   _____
2. How did you feel when you were doing your job? _____
   _____
3. How did your assembly line people work together?
   well_____ fairly well _____
   poorly_____
4. Were you happy with the way your assembly line worked?_____ Explain. _____
   _____
5. Was your supervisor helpful? _____
   In what ways? _____
6. How could things have been better?_____
   _____
7. Would you like the same job another time?_____
   Explain. _____
8. What other job would you like to try? _____
   Why? _____
9. Write about some things you learned about
   a) a *production* line and how it works
   b) yourself and your job
   c) others and how they work (do not use names, but tell about the way others work)

   Use the back of this paper to write about these three things.

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5-6

ON THE LINE

by Barbara Zicht

Barbara Zicht is the Assistant to the Director of The National Center of Economic Education for Children at Lesley College.

Production and Specialization

Due to the vast number of goods and services available in our society, children's material wants constantly increase. Yet most children are unaware of the many factors that are involved in the *production* of these goods and services. Scarcity of resources creates the need for decision-making in *production*. Children should learn about the three factors of *production* (land, labor and capital), the three basic questions every society must answer due to scarcity (what to produce, how to produce and for whom to produce), and the ways to increase the amount of goods and services produced with the same amount of limited resources (*specialization*, division of labor and technological improvements). *Specialization* refers to the employment of humans, geographical regions, machinery, etc. in a specific task requiring a special skill or attribute. Division of labor refers to human activity only. The terms *specialization* and division of labor are used interchangeably when referring to human activity. As children obtain an understanding of the world of *production*, they will become better equipped to handle their roles as consumers and producers in a complex society.

Goals

The students will be able to:

1. List the three factors of *production* (land, labor and capital) and give examples of each.
2. Explain the three basic questions every society must answer due to scarcity — what to produce, how to produce and for whom to produce.
3. Explain *specialization*.
4. List and explain several advantages and disadvantages of *specialization* and mass *production* with assembly lines.

Teaching Activities

1. **Factors Of Production.** Ask the students to list all the things they would need to start a vegetable garden and to sell fresh vegetables. Guide them to think in broad terms and to include examples of all three factors of *production* — land or natural resources (land for a garden, water), labor or human activity (planter, harvester, seller), and capital or buildings, tools, and man-made goods that aid in further *production* (hoe, rake, fertilizer, seeds, vegetable stand). List some of their suggestions on the blackboard and guide the students in classifying the items under the appropriate factor of *production*.

Discuss the importance of each factor of *production*. Is any one factor more important than the others? No, all three are needed in all *production* processes.

2. **What, How, For Whom.** Divide the class into groups of five or six. Give each group seven or eight art materials such as glue, tag board, paper, markers, crayons, paint, scissors, hole punch, wire, etc. Tell the groups that they may produce whatever they want with the materials they have been given. Give them 30 minutes to do so. Have each group share their product with the class. Discuss what *production* decisions had to be made (what to produce, how to produce). Note that these decisions had to be made because of scarcity. Ask the group what they would like to do with the product. This last decision (for whom to produce) must also be made due to scarcity.

3. **Production Without Specialization.** Pick an arts and crafts project that involves several independent steps such as paper bag puppets or a paste or sew burlap design wall hanging project. Give each child 45 minutes to make one of their own. In a class discussion note that the class was able to make only enough for one project per person in 45 minutes. Ask the class for suggestions as to how they can increase their productivity and make more than one project per person. Among their ideas should be *specialization*, division of labor or assembly line techniques. Discuss the possible advantages (increased *production*, improved skills at a particular function) and disadvantages (tedious, repetitive) of an assembly line.

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4. **Assembly Line Field Trip.** Discuss the introduction of assembly lines and mass *production* to industry. Producers were satisfied because their workers were able to produce more in the same amount of time (increased productivity). Some workers were content because they liked doing their special job and they became more skilled. Other workers were unhappy because they became bored and weary of doing only one small part of the total *production* process.

Take the class on a field trip to a local industry that has an assembly line *production* process (candy, toy, construction, garment, etc.). Many industries will have tours available for classes. The students should be prepared to ask questions of the workers about how they were trained, the skills they need for their jobs, their attitude toward their work, etc. Follow-up the field trip experience by discussing the advantages (develop special skills, increased *production*, etc.) and disadvantages (boredom, less conducive to personal pride in work, dehumanization, etc.) of *specialization*. Note that each worker on the assembly line is dependent upon the previous workers. All workers must do their jobs properly in order to produce a high quality good.

5. **Classroom Assembly Line.** Explain to the class that they will be making the same project as in activity three, but this time they will all be specialists and work on an assembly line. Have the class analyze the project to determine the specific tasks involved in its *production*. Divide the class into groups so that the number of children in a group is the same as the number of tasks for the project. For each group, set up a work station for each task to be done. Let the groups decide which child should do each task but stress that they should do the job for which they are best qualified. Give them 45 minutes to produce as many items as they can.

Ask the children how they felt about doing their jobs and working on an assembly line. Note how many more projects were produced with this method of *production* than with each child working alone.

Keeping the children in the same groups, let the assembly line start to produce again, but this time change jobs every three minutes by having the children move from one station to the next. Stop *production* after 45 minutes and see how many projects were produced. Was this method as efficient as the first assembly line? No. Why not? There was not enough time for each child to become highly skilled in each task. Was this method better for alleviating boredom? Yes, because each child got to try every job (variety of work) and didn't have to work at any one task too long. Note that three minutes per station is clearly not long enough to become efficient at any task. This problem alone will cause a decrease in *production*. The interdependence of workers in an assembly line should be stressed. In fact, *specialization* causes workers to be dependent upon others. Since specialists spend all their time producing a specific good or service, they need to buy the other goods and services they want from other producers.

6. **Specialization Collage.** Have each student make a collage of a specific good of their choice. The collage should consist of pictures of the good, the workers involved in its *production* and the materials (resources) used in its *production*. An alternative would be to choose geographical *specialization* as a topic and use pictures of goods and services produced by a specific region. Pictures can be obtained from magazines and newspapers or drawn by the children. The children may need to do some research about their good or geographical region in order to determine the resources used or the goods and services produced. Have them share their collages with the class. A bulletin board (possibly in collage format) can be made to display the collages.

7. **Economic Word Search.** Have students find the words listed below in the matrix and write a brief description for each term.

producer	*economy*	*capital*
specialist	*scarcity*	*division of labor*
land	*labor*	*specialization*
opportunity cost	*production*	*consumer*
resources	*factors of production*	

N	C	E	C	O	N	O	M	Y	L	V	R	E	A	M	K
B	Z	N	O	O	M	K	C	L	M	R	T	V	X	B	C
O	N	G	V	F	N	D	I	V	I	S	I	O	N	O	F
Z	S	D	G	C	K	S	L	A	B	O	R	N	J	Y	W
Y	O	P	P	O	R	T	U	N	I	T	Y	C	O	S	T
K	A	G	E	D	C	K	N	M	G	X	H	A	L	U	S
L	D	C	A	C	F	A	V	Y	E	G	K	F	A	Z	C
A	N	Q	U	X	I	B	P	N	H	R	G	H	B	W	A
N	S	P	E	C	I	A	L	I	Z	A	T	I	O	N	R
D	Y	B	W	F	U	K	L	H	T	W	V	F	R	Z	C
P	R	O	D	U	C	E	R	I	B	A	L	D	C	Q	I
W	R	E	S	O	U	R	C	E	S	X	L	J	K	U	I
V	X	J	F	P	R	O	D	U	C	T	I	O	N	D	Y
F	A	C	T	O	R	S	O	F	U	V	Y	I	E	L	H
G	P	R	O	D	U	C	T	I	O	N	O	G	X	N	A

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Eliot Snider (left), Chairman of the Lesley College Board of Trustees, presenting a citation to Ervin Pietz (right) honoring his endowment of The Ervin Pietz Chair in Economic Education at Lesely College.

ERVIN PIETZ CHAIR IN ECONOMIC EDUCATION

Lesley College has announced the creation of the first endowed chair of economic education for children in the United States. The professorship, to be named "The Ervin Pietz Chair in Economic Education at Lesley College," will be associated with The National Center of Economic Education for Children located on the Lesley College campus in Cambridge, Massachusetts.

The chair is named in honor of its major donor, Ervin Pietz, President and Chief Executive Officer of the Barry Wright Corporation of Watertown, Massachusetts. Pietz was elected to the Corporation of Lesley College in 1967. He has been a member of the Executive Committee of its Board of Trustees for many years and has served as Chairman of its Finance Committee.

The Chair's first occupant is Professor Stanley P. Mengel, Director of The National Center of Economic Education for Children. He was formerly Director of the Center of Economic Education at the University of Akron and is a past president of the Ohio Council on Economic Education.

According to Don A. Orton, President of Lesley College, "The Ervin Pietz gift was the decisive support required to establish The National Center of Economic Education for Children. His enlightened interest enabled our Trustees to mobilize Lesley's efforts to establish The National Center."

RESEARCH CONFERENCE

The first National Research Conference on Economic Education for Children was held May 1-4 on the Lesley College campus. Sponsored and conducted by The National Center of Economic Education for Children, the purpose of the conference was to assess the state of past and current research in the field of economic education for children, to identify the most viable directions for future research, and to suggest structures to encourage additional work in this area. A Proceedings will be published.

Invitations to attend the conference were accepted by:

Dr. Stephen Buckles	University of Missouri-Columbia
Dr. John Chizmar	Illinois State University
Dr. Donald Davison	University of Iowa
Dr. George Dawson	Empire State College (SUNY)
Dr. George Fersh	Senior Consultant, The National Center Awards Program
Dr. Karen Fox	Northwestern University
Dr. Ruth Hansen	University of Minnesota
Dr. Shirley Koeller	Texas Tech University
Dr. Marilyn Kourilsky	University of California, Los Angeles
Dr. William Luker	North Texas State University
Dr. Thomas McKinnon	University of Arkansas
Dr. Trudy Murray	Northwestern University
Mr. John Redmond	University of North Carolina-Greensboro
Dr. Thomas Savage	Texas A & M University
Dr. Richard Shepardson	University of Iowa
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The Elementary Economist ©

The National Center of Economic Education for Children

THEME: DEMAND, CONSUMPTION

IN ISSUE: Vol. 2, No. 1

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DIRECTIONS

The academic discipline called economics evolved from the desire to understand the ways in which scarce resources were utilized and distributed in various countries. In 1776 Adam Smith began the development of basic principles that explain *The Wealth of Nations* in an effort to determine why citizens of certain countries enjoyed higher levels of *consumption* than others. That research was continued by others and led to the identification of postulates that are fundamental to the understanding of a society's economic behavior.

Previous issues of **The Elementary Economist©** have explored scarcity, opportunity cost, and production and specialization. This issue deals with *demand* and *consumption. Consumption* is the source of our economic well-being. While we consume some items over time (cars, houses, shoes), other items are consumed immediately (movies, food, medical care). The opposite of *consumption,* saving, provides for future *consumption.* Saving will be examined in a later issue.

There are universal principles that help explain *consumption* and *demand.* The law of *demand* states that people *demand* and consume more of a good or service when its price decreases relative to the prices of other goods and services. This is because the opportunity cost of purchasing the good or service decreases as its price decreases.

The converse is also true. People will *demand* and consume less of a good or service when its relative price increases because the opportunity cost of purchasing it also increases. Individuals respond differently to price changes due to differing personal tastes, income and resources.

Stanley P. Mengel
Director

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1980-1981 Awards Program

The National Center of Economic Education for Children is again sponsoring an Awards Program as part of its efforts to stimulate economic education in the elementary grades. The Awards Program is unique in that it focuses on improving the training of future teachers, on improving in-service programs of elementary economic education curriculum in use by school systems, and on encouraging the production of quality materials for teaching economics in elementary schools. The divisions are defined as follows:

Pre-Service Teacher Training Division: Eligible applicants will be either 1) those who teach social studies and/or general methods courses to pre-service teachers for the elementary school level or 2) those who teach social studies courses which include preparation for pre-service teachers to teach economics in the elementrary school. Entries may consist of materials describing courses of study, workshops, conferences and seminars, research, administrative procedures and techniques, and communications.

In-Service Teacher Training Division: Eligible applicants will be school systems that conduct programs for elementary school teachers to improve the teaching of economics. Entries may consist of materials describing courses of study, workshops, conferences and seminars, research, administrative procedures and techniques, and communications.

Teaching Materials Division: Eligible applicants will be organizations that produce and publish materials for teaching economics in the elementary school curriculum.

Again, awards of $5,000 are being offered for First Prize in each division and $100 is being offered to each entrant who qualifies for an Award of Distinction in each division.

Awards will be given within a specific division only if entries meet the criteria set by the judges for each prize.

Dr. George L. Fersh is the Senior Consultant to the Director for The National Center Awards Program.

For entry forms or more information write to:
Stanley P. Mengel, Director
The National Center of Economic Education for Children
Lesley College
29 Everett Street
Cambridge, Mass. 02238

K-2

DOLLAR$ AND ENE

by Dr. Ruth Hansen

Dr. Ruth Hansen has taught pre-school through grade three in Wisconsin and Minnesota, and was the on-camera teacher for an educational television series. She is the coordinator of a University of Minnesota Student Teaching Center and the Early Childhood Education Specialist for the St. Louis Park, Minn., Schools.

Demand and Consumption

Economics is a basic part of young children's daily lives, so teachers must provide time, materials and activities that assist the children in solving the economic problems in which they increasingly become involved. One such problem is to decide how to use limited resources. The reason people *demand* products or services is because they want to improve their well-being. The use of these goods or services is called *consumption*.

All primary age children are consumers, but it is doubtful that they understand or are aware of the factors that influence their behavior as consumers. The factors influencing *demand* and *consumption* which can be understood by primary age children include preference and taste, income, prices of goods being demanded, prices of other products and time.

Goals

After experience with these activities, the students will understand:

1. The factors that influence *demand* and *consumption* (income, price, time, taste and professional advertising)
2. The difference between demands and wants
3. That more is consumed at lower prices and less at higher prices
4. The purpose of a market survey and how to conduct it
5. Graphing and charting data and drawing conclusions from that data

Teaching Activities

Prior to these lessons, write a letter to parents informing them of the activities in which their children will be involved. Suggest ways they could supplement the learning such as take their children shopping, let their children make some decisions as consumers, discuss advertising tactics, do comparative shopping, etc. Invite parents to the classroom as resource people. Ask parents to send to school any resources they use as consumers, such as stamp redemption certificates, coupon index books, hand calculators to keep track of prices as they shop, "best buy" reference books, etc.

1. **How Do Demands and Wants Differ?** Ask the students what *demand* means. List their definitions and discuss the idea of multiple meanings and have them think of other words with multiple meanings. Explain that *demand*, in economics, refers to the quantity of goods and services that buyers are willing and able to purchase at various prices at a given time. Compare this with wants which are unlimited (and many of which we are unable and/or unwilling to buy). Have the children give examples of wants such as time to play outside, a bicycle, a trip to a zoo, etc. Then ask the children to think of some general categories for which everyone has *demand* such as food, leisure time, clothing, housing, etc. List these on a chart. Then determine if everyone has the same demands within the categories. For example, within "housing," a quick survey among your students might indicate that families live in apartments, duplexes, houses, mobile homes, etc.

To illustrate further the definition of *demand*, show the students a colored marking pen or other item of interest to them. Ask them how many they would be willing to purchase if each cost 25¢, 20¢, 15¢, 10¢, 5¢, and 1¢. You might prefer to have the students collect the data in small groups or individually and then compile the class data on a chart.

Guide the students to conclude that more pens will be purchased at lower prices and fewer at higher prices. Repeat this type of activity on subsequent days to reinforce the *demand* and *consumption* concepts.

2. Income Affects Demand. Distribute a 50¢ "allowance" (chips or play money) to all students. Tell them they are to use this money to "buy" their school lunch. The selections will be made from a menu you have prepared. Have several children who have selected different menus share theirs with the class.

To illustrate some factors that influence *demand*, tell the students that the cost of cocoa has decreased which results in a 3¢ decrease in the cost of chocolate milk. Change the price of chocolate milk on the menu. Determine what effect this price increase will have on the students' selections.

Now explain that you heard a television commercial which reported that white milk was better for your health than chocolate milk. Again determine if this new information affects the students' *demand*.

And last, give each student a 15¢ raise in their allowance. How would this affect their selection of food?

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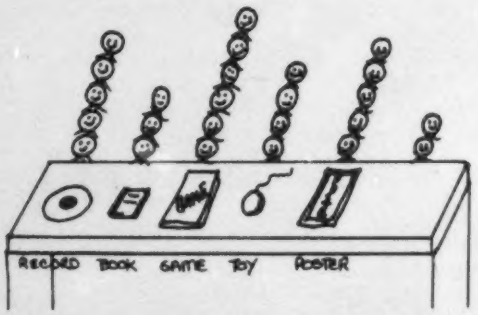
School Lunch Menu

Hotdog	30¢	Orange	10¢
Peanut Butter	25¢	Apple	15¢
Pizza	35¢	Cookie	5¢
Salad	20¢		
Chocolate Milk	15¢		
White Milk	10¢		

3. Prices Affect Demand. Prepare a ditto master similar to the chart, using a number of products. Distribute grocery store advertisements, scissors and paste and direct the children to complete their sheet by cutting out ads of the products from these different stores. Lead them to the discovery that the same product does not always cost the same price at all stores. Discuss how this variance in price might affect the *demand* for the product at certain stores and the idea that browsing through grocery ads can help one to save money.

Item	Don's	Special Value	Mary's Mart
Smith Bacon			
Miller's Paper Toweling			

4. Taste and Preference Affect Demand. Bring five items of relatively equal value and interest to your students into the classroom. Tell the children all items cost $1.00, and have them decide, by making a "human graph," which they would purchase. Place the items on a table and instruct the children to form a line behind the item they would purchase. (See sketch below.) Take a photograph of the "human graph" by standing on a table or chair so that you can focus on all children as they stand in the line of their choice. Be sure to allow a category for those children who choose not to spend their money on any of the available items. *Demand* is affected by individual preferences. A variation is to use things the children might choose to do in one hour of free time as categories. The cost here is time, not money.



5. Time Affects Demand. Collect a variety of pictures of seasonal food, clothing, activities, sports equipment, etc. Discuss that time (in this case, seasons) has a direct effect on *demand*. Share several examples such as, "Last winter I was going to vacation in a warm climate and wanted to buy an inner tube to use while swimming. I went to six stores and couldn't find one. The salespeople all told me that they only have inner tubes to sell in the summer." Elicit examples from the students.

Provide old magazines and scissors and instruct the students to work in four groups (one for each season) and cut out pictures of items that would be in high *demand* during their particular season. Design a bulletin board for the students to display their pictures. (See next activity.)

6. Bulletin Board Display. Make a bulletin board in which students participate by classifying and categorizing pictures and displaying the results of their surveys. Add graphs, charts and grocery advertisements from the other *demand* and *consumption* activities.

7. Take a Field Trip. Plan a walking or bus field trip to a store to learn techniques merchants use to create *demand* and to reinforce the concepts treated in previous activities. Be sure to make the necessary arrangements including the topics for discussion such as the effect on *demand* of sale prices, advertising, personal preference, time, placement of displays, opening of new stores, etc.

8. School Resource People. Invite the school librarian and lunchroom manager into the classroom to discuss how students' tastes and preferences affect their work.

9. Devise a Game. Prepare two index cards for each child, one labeled INCREASE and the other labeled DECREASE. Think of situations that would cause an increase or decrease in *demand* for goods or services, drawing your ideas from the experiences the children have had. The students respond to the situations you read by showing the correct card. Ask the students to think of circumstances that would cause changes in *demand* to which their classmates can respond.

Sample situations:

a. Phonograph records go on sale. The quantity demanded will probably _____. (increase)
b. The price of apples increases. The quantity demanded will probably _____. (decrease)
c. During winter months the *demand* for bikes will probably _____. (decrease)
d. You get a raise in your allowance. Your *demand* for ice cream will probably _____. (increase)
e. Your neighbor loses his job. His *demand* for many products will probably _____. (decrease)
f. Advertising popcorn in school would probably cause a(n) _____ in *demand*. (increase)
g. If the lunchroom offered you a free cookie with a glass of milk, the *demand* for milk would probably _____. (increase)

(Please turn to page 8 for a bibliography.)

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DEMAND MOTIVATES

by Dr. Patricia A. Moseley

Dr. Patricia A. Moseley is an Associate Professor in Elementary Education and the Associate Director for the Center for Economic Education at North Texas State University. She taught third through sixth grades in Nashville, Tenn., and Cincinnati, Ohio.

Demand and Consumption

Understanding how the economic system reacts to consumer *demand* for goods and services is basic to understanding the function of price in an economic system. Part of this understanding deals with the generalization that persons often have different wants. Further, wants are satisfied by *consumption* of the two economic outputs, goods and services. The spending of money for the use *(consumption)* of goods and services creates a *demand* for the scarce resources. The role of the entrepreneur (the supplier of goods and services) is to respond to *demand*.

Goals

The student will be able to:
1. Define goods, services, *demand* and *consumption*
2. Describe the role of the entrepreneur and the worker in providing goods and services
3. Use the skills of hypothesizing, locating and obtaining information, applying information, and graphing.

Teaching Activities

1. Goods and Services. Define goods (something you can touch) and services and explain that these are what people *demand* and consume. Have students list five goods and five services they want. In small groups have students compare and contrast the lists. You may wish to extend this activity by asking students to create a similar list reflecting the wants of their families. Students could be asked to cut out or draw pictures of the items on their list. These can be used for a bulletin board display.

2. Demand Affects Producers. Provide telephone directories and ask students to count the number of dentists and podiatrists; pediatricians and ophthalmologists; physicians and veterinarians; travel agencies and television repair services; restaurants and hair dressers/barber shops, etc. (You may wish to adapt the choices to local industries or services.) Compare and analyze the relative numbers in each field. Through discussion, guide the children to the understanding that, in a pure free market economy and in fields unregulated by government, the number of producers of a particular good or service is directly related to the level of *demand* for that good or service.

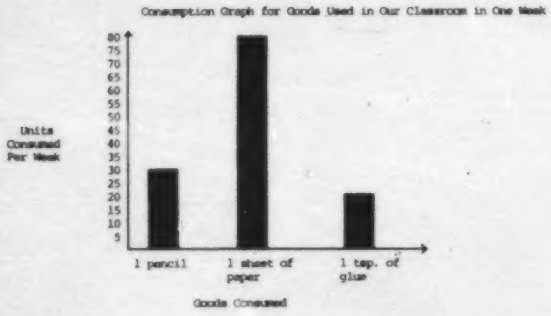
3. Anticipation of Demand. Invite a buyer for a local department store and a grocer to visit the classroom to discuss how inventories reflect the levels of *demand* and how anticipated *demand* influences what the buyer buys for the store and what the grocer stocks (e.g., certain products and brands are allocated more shelf space).

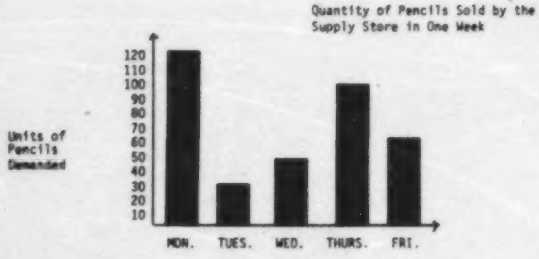
4. Prediction of Consumption. Discuss with students why:
   a. there are now fewer buggies than cars
   b. there are now fewer blacksmiths and more auto mechanics
   c. more ice cream than hot chocolate is consumed in warm weather
   d. many children will ask for/receive 'Star Wars' memorabilia as birthday, Christmas or Chanukah gifts this year
   e. many people are providing their own services ("do it yourself" projects) rather than paying others to provide those services

Discuss how *demand* reflects improved technology, seasons, fads and current economic conditions. Have students make predictions about future *consumption* and explain their predictions.

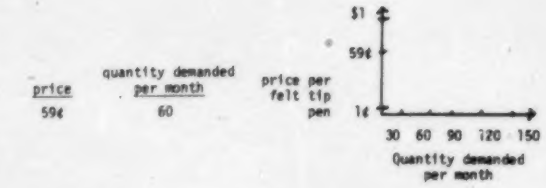
5. Businesses Meet Demand. Contact the local Chamber of Commerce for suggestions of business people willing to visit the classroom to discuss how and why they began their businesses. Businesses are formed to satisfy the *demand* of society for various goods and services. (*Entrepreneurs in Oklahoma History*, an excellent example of using this technique to write about historical figures, can be obtained from the Oklahoma Council on Economic Education, Oklahoma State University, College of Business Administration, Stillwater, Okla. 74074. It is presently free of charge.)

6. Recording Consumption. Have the class gather data and draw a *consumption* bar graph for goods used in the classroom. Plan with the students some guidelines for recording *consumption*, e.g., how does one record pencil *consumption* on a daily basis (by measuring the length). They need to use designated units such as a pencil, sheet of paper, bottle of glue, etc. Plan also how individual records will be maintained. Gather data from a similar classroom and compare usage. Plot daily or weekly *consumption* for a week or a month. If your school has a supply store, extend this activity to include plotting its sales and make comparisons between the store and classroom b. graphs.



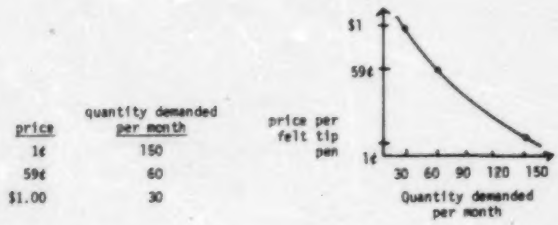


7. Demand Curves. This activity will demonstrate through graphing how the level of *demand* for specific items depends upon the price of the item. Ask students how much one felt tip pen costs. Determine the average price for a felt tip pen and the average number of felt tip pens a student uses in one month. In a table, record the quantity of felt tip pens demanded by the class per month and the average price determined. Note that it is important to choose a period of time appropriate for the item under consideration. All *demand* curves are derived from the amounts purchased at different prices in a given period of time.



Now ask the children how many felt tip pens they would buy in a month for personal use if the price were 1¢. Note that because people are different, individual students will respond in different ways. Some will increase the quantity they *demand* at the lower price and some will not increase the quantity demanded. As a whole, the class will *demand* more felt tip pens at lower prices. Record and graph the amount of felt tip pens demanded by the class at a price of 1¢.

Repeat, using a price of $1.00. The higher price will result in a lower total quantity demanded.



Note that extreme prices were used to illustrate the law of *demand*. The basic point is that at lower prices, people will *demand* more of a good or service and at higher prices they will *demand* less.

Guide the children through discussion to the understanding that the amount of goods and services demanded and purchased varies with the prices charged.

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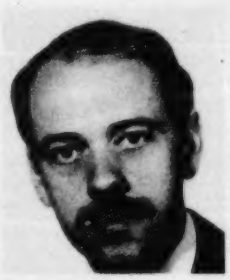
RECESS PLOTS

by Robert Littlefield



Robert Littlefield teaches grades four through six in Andover, Mass. He is the author of The Children's Economy: A Simulation of the Working World. *Under a New Emphasis grant, he is piloting this program in the Andover schools.*

Demand and Consumption

Market *demand* is one concept with which intermediate grade students can readily identify. A good way to initiate the discussion is to list items for children's personal *consumption:* recess, roller skates, candy, gum, school supplies and sports-related items. From this base, one can easily turn to such pervasive societal needs as housing, energy and food. As the students develop their understanding of the relationship between price and quantity demanded, they will also have ample opportunity to sharpen the graphing skills so important in mathematics and the sciences.

Goals

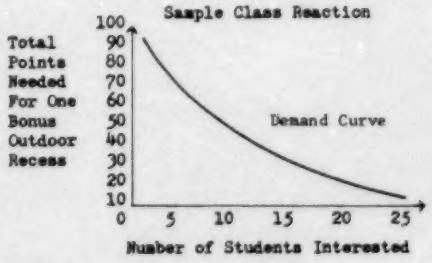
Students will be able to:

1. Explain the relationship between price and quantity demanded
2. Illustrate how price affects both personal and societal *consumption*
3. Interpret *demand* graphs
4. Explore reasons for shifts in the *demand* curve

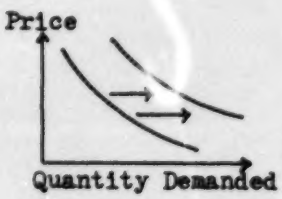
Teaching Activities

1. Buying Recess (A teacher directed discussion). One of the commodities most sacred to school children is recess. Indoor recess during inclement weather also presents many teachers with unwanted interruptions and behavior problems. Ask students if they would be interested in earning points during indoor recess which could be used to purchase extra outdoor recess time. Have students determine the behaviors for which points could be earned. Establish a scale of points to be earned with the total number of points for a perfect indoor recess as ten. Now ask how many students would work toward earning one bonus outdoor recess if they could earn one for ten points. Plot this number on a graph.

Continue asking the question while raising the number of points needed to purchase this bonus outdoor recess. This will produce a *demand* curve. As the cost of one outdoor recess goes up, the number of students interested in purchasing it goes down. Now ask the students to interpret the curve: the higher the price of a good or service, the less quantity is demanded. At this point, you might want to discuss ways students could implement and monitor such a bonus recess program.



2. Word Search. The weekly allowances of all children in Pleasantville have doubled this year. Discuss why this has caused the *demand* curve for all items sold at Memorial Stadium to shift to the right (an increase in market *demand*). All children *demand* more goods at every price since their income has increased. This causes the *demand* curve to shift to the right because the total quantity demanded is greater at every price. Can you find these items?



The National Center of Economic Education for Children, Lesley College, Cambridge, Mass. 02238

up (6 times)
hot dogs
peanuts
popcorn
hamburgers

cotton candy
programs
banners
ticket

souvenirs
pretzels
potato chips
cold drinks

F	H	A	T	C	H	U	P	R	E	T	Z	E	L	S
R	A	O	Z	O	O	R	E	R	T	H	Y	O	U	S
C	M	S	T	L	T	L	A	S	E	E	D	U	U	P
O	B	T	L	D	O	G	N	R	C	T	N	T	S	I
L	U	I	E	R	O	P	U	E	O	B	A	Q	U	H
D	R	C	S	I	T	G	T	N	L	A	C	P	Z	C
D	G	K	M	N	Z	L	S	N	D	N	N	L	D	O
R	E	E	C	E	C	R	E	A	M	N	O	P	O	T
I	R	T	M	O	U	P	E	B	E	E	T	R	L	A
N	S	O	U	V	E	N	I	R	S	R	T	E	Q	T
K	P	O	P	C	O	R	N	L	S	S	O	T	U	O
S	P	R	O	G	R	A	M	S	P	R	C	Z	C	P

3. What Does the Demand Curve Look Like? This activity can be done independently by the students if they have been given ample prior instruction. Otherwise it is best done as a class activity with the teacher as the guide.

Which *demand* curve would you choose to explain the following?

a. Vital Corporation's gymnastic equipment has just been proven safer than all other brands. (#2). (Quantity demanded will increase at all prices, therefore the *demand* curve will shift to the right.)

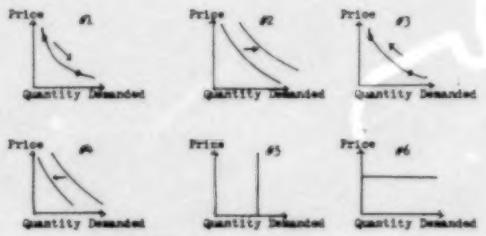
b. Taxes have increased greatly, giving people less money to spend on school supplies. (#4). (Quantity demanded will decrease at all prices, therefore the *demand* curve will shift to the left.)

c. The price of roller skates has just increased greatly. (#3). (The quantity demanded will decrease because the price is higher, therefore a new point is reached to the left on the same *demand* curve.)

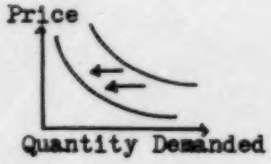
d. People continue to drink the same amount of Sizzle Fizz regardless of price. (#5). (At every price the same quantity is demanded, therefore the *demand* curve is vertical. This can occur over a small range of prices.)

e. A great crop of cocoa has lowered the price of chocolate. (#1). (The quantity demanded will increase due to the decrease in price, therefore a new point is reached to the right on the same *demand* curve.)

f. It has just been discovered that Pleasantville's water is polluted. Most people want to buy bottled spring water. The price of spring water has been set by the town commissioner and cannot be lowered or raised. (#6). (Since the price remains the same regardless of the quantity demanded, the *demand* curve is horizontal.)



4. Brainteaser. In an energy crisis, the market *demand* (total *demand* for a society) for all of the following items might decrease. (The *demand* curve shifts to the left because the quantity demanded has decreased at every price.)



Brainteaser

A. Lincoln Continental	_____	Flash floods (D)
B. Air conditioners	_____	Great escapes (E)
C. Tires	_____	Incandescent vacuums (F)
D. Light shows	_____	Abe's car (A)
E. Vacations	_____	Atmosphere stylers (B)
F. Light Bulbs	_____	Hard work (C)

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Kalman Glantz and student evaluate the effectiveness of an economic game.

HOFFMANN-LA ROCHE INC. EVALUATION PROJECT

Evaluating the effectiveness of economic games as aids to teaching basic economic principles has been the objective of a study at Lesley College. Funded by a grant from Hoffmann-La Roche Inc., Kalman Glantz, instructor at Lesley College, selected students from his economic classes as coordinators and other students volunteered to be evaluators. Students from Lesley education core and special education methods classes also developed games as an outgrowth of the evaluation project.

In addition to the games developed by Lesley students, approximately 20 commercially marketed and 50 non-commercial (teacher developed) games have been collected for evaluation. The study is particularly directed to games with measurable outcomes, winners and losers.

Evaluations are being carried out in public school classrooms by Lesley College student teachers. The National Center of Economic Education for Children has also contacted other teachers and administrators throughout the country to invite participation in the project either by conducting evaluations in their schools or by submitting additional games to the Hoffmann-La Roche Inc. project.

An unexpected outcome generated by the project is the discovery of the lack of games suitable for special needs children and the development of games by Lesley students that can be adapted to meet the needs of those children. "Tricky Turtle," created by Lesley junior Susan McElroy, is a board game devised to teach the uses of money to first graders and special needs children. Lesley faculty member Linda Brion-Meisels says that economic games have particular value for "survival skills" for handicapped and special needs children.

Glantz comments, "I've found that both students and teachers are more receptive to teaching elementary economics once they've had the opportunity to evaluate what's out there and discover how well economic teaching activities mesh with the core curriculum. The Hoffmann-La Roche study, being so open-ended, has allowed us to explore ways to integrate economics with what is already going on in the classroom."

Teachers interested in participating in this project or persons who wish to submit economic games for evaluation are requested to write to The National Center of Economic Education for Children, c/o Hoffmann-La Roche Inc. Economic Games Evaluation Project, Lesley College, 29 Everett Street, Cambridge, Mass. 02238.

REACTIONS FROM READERS

The Elementary Economist© features teaching activities that are classroom tested. We are most grateful to the many who have written with comments and suggestions and encourage you to continue to tell us your reactions. **The Elementary Economist**© is designed to be a teaching tool, and there is no better way to judge its effectiveness than to hear from the people who are using it.

Books, Books, Books

The following list includes books appropriate for primary children as well as quick reference and background materials for teachers and accelerated students.

Burmingham, John, *Would You Rather,* (New York, Thomas Crowell, 1978)

Burns, Marilyn, *I Am Not a Short Adult!,* (New York, Little Brown and Company, 1977)

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Vol. 2, No. 2 THEME: SUPPLY, PRODUCTION

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DIRECTIONS

The most difficult situations people deal with during their lives are those that involve some facts of life that are not as they wish and cannot be changed. The law of *supply* is a fact of life that people often wish was not true. It states that there is a cost to all *production* and that usually expanded *production* encounters increased costs.

The last issue of **The Elementary Economist**© dealt with the concept of demand. The law of demand states that consumers will purchase larger quantities of a good or service when prices are lower, and smaller quantities when prices are higher. A complete study of an economic market must include the concept of *supply* and the laws governing *production*. While there do exist situations like, 1) improvements in technology, labor quality or management lowering *production* costs, 2) decreases in cost due to larger scale, more efficient *production;* most *production* processes have already secured most of the gains that can be expected from these sources. Consequently, as population and income levels increase with more people spending more money, increases in demand for one product can only be satisfied by "bidding away" productive resources (land, labor, capital) from other products. To "bid away" a productive resource, a payment equal to the opportunity cost (**see The Elementary Economist**©, Vol. 1, No. 2) plus an added payment for incentive to change is normally required. Therefore, when all elements of *production* (plant, manpower, equipment and materials) are fully employed or being used to near capacity, an increase in *production* (quantity supplied for sale) requires increasing costs. The existence of large quantities of unemployed resources, on the other hand, decreases the pressure for prices to increase. The result is that small and large businesses will only offer larger quantities of a product (a good or service) if they are able to sell all units at a higher price.

Teaching activities for grades K-2, 3-4, and 5-6 relating to these concepts are in this issue of **The Elementary Economist**©.

Stanley P. Mengel
Director

Winners of Awards Competition Announced

The judges of The National Center Awards Program have deliberated and awarded prizes for the 1979-80 competition.

Pre-Service Division: Tieing for the $5,000 first prize were the entry of Dr. Lucille G. Ford and Ellen M. Keslar, Ashland College, Ohio, and the entry of Dr. Juan S. Solis, Pan American University, Texas.

Dr. Ford and Ms. Keslar have designed a series of individual class meetings to train pre-service teachers in the use of unique economic materials to be used in their field experience. Dr. Ford is Director of the Gill Center for Business and Economic Education at Ashland College, Ashland, Ohio, and Ms. Keslar is Field Director at the Gill Center.

Dr. Solis prepared extensive activities combining bilingual (Spanish) educational goals with those of economic education for pre-service elementary teachers. He is an Assistant Professor in the Department of Elementary Curriculum and Instruction at Pan-American University.

In-Service Division: The $5,000 first prize was awarded to the Fayette R-III School District, Fayette, Missouri. The entry was submitted by Ms. Maureen Graham, Economic Education Coordinator, who was responsible for the program along with Ms. Vera Freeman and Mr. Stephen Buckles, both of the Center for Economic Education at the University of Missouri-Columbia. The Fayette schools planned and conducted a complete revision of the economic education curriculum. This project involved in-service training in economic content and methodology for all elementary school faculty.

An Award of Distinction was granted to the Akron Public Schools for the entry submitted by Ms. Diane Greene, Career Education Coordinator and Mr. Frank Pichichero, Economic Education Curriculum Specialist.

Teaching Materials Division: The $5,000 first prize in this division was awarded to the Missouri Council on Economic Education. The entry, submitted by Dr. Robert Strom, Executive Director, and Ms. Marianne Kurth, Associate Director, is a book of practical classroom elementary economic education teaching activities addressing numerous existing curricular concerns of teachers.

An Award of Distinction was given to Ms. Abbejean Kehler, Assistant Director of the Center for Economic Education at Ball State University, Muncie, Indiana.

(cont'd on page 8)

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K-2

HOW MANY SHAKES DOES IT TAKE?

by Bruce Wellman

Bruce Wellman teaches first and second grades in Concord, Massachusetts. He is interested in the integration of math, science, language, art and social studies skills with the study of economics.

Supply, Production

Primary age children have usually had more experience as consumers than as producers. Most have grappled with the simple truth – you can't have everything you want (scarcity). They are familiar with demand and have experienced the limits of their own ability to pay for toys and other desired products. They have also experienced the limits of their parents' ability and willingness to pay for desired products.

But most young children are not as aware of the *supply* side of the *supply*-demand equation, the role of the producer, although they are producers. At home, they make their beds, wash dishes, take out the trash and feed pets. In school, they put up chairs, clap erasers, clean sinks, take lunch counts and perform a variety of other service tasks. Knowing about their parents' occupations also adds to their understanding of *production*.

As children gain experience as producers of goods and services, they will also begin to understand the role of producers in an economy and gain respect for quality craftsmanship and the dignity of work.

Goals

The students will be able to:

1. Recognize the difference between producers and consumers.
2. Recognize the difference between goods and services.
3. Understand the following vocabulary: *supply*, producer, consumer, *production*, goods, services, substitute, complement, resource, product, market survey and opportunity cost.
4. Recognize that all products come from resources.
5. Recognize the difference between substitutes and complements.
6. Understand the opportunity cost of *production*.

Teaching Activities

1. **Goods or Services.** Draw pictures of people at work or cut pictures out of magazines. Try to get an equal number of pictures depicting the *production* of goods and the performance of services. Mount the pictures on cardboard or oaktag and make a learning center where children separate the pictures into two categories, goods and services. The cards can be numbered. Children can record their answers by writing the numbers of the pictures showing the *production* of goods on one half of an answer sheet and the numbers of the pictures showing services on the other half.

2. **More Goods and Services.** Play a simple game. Say, "I'm thinking of a person who puts out fires." Ask the class if that person is producing a good or a service. For a variation of the game, have them name the profession or occupation, as well as identifying the type of *production*, goods or services. Eventually members of the class will be able to create the clues.

3. **Parents' Occupations.** Have the children interview their parents about their occupations. What do parents do? Do they produce goods or services, or both? Have the children draw pictures of their parents at work.

   If possible, do the same thing with grandparents. Has the nature of jobs changed over time? (The grandfather of one of my former students drove a horse-drawn milk wagon in his younger days.)

4. **Classroom Visitors.** Have parents or others visit the class to talk about their jobs. The children can interview the visitors about the type of *production* with which they are involved in their work.

5. **Children As Producers At Home.** Ask the children what types of services they produce at home. Have them illustrate and label pictures of themselves performing these tasks. Help the nonwriters label their pictures.

6. **Children As Producers At School.** Ask the children what types of services they perform at school, e.g., empty the trash, erase the chalkboard, feed pets, etc. Paint murals depicting these service activities.

7. **Products and Resources.** Make a learning center with pictures of resources used for *production* and the resulting products. Draw pictures or cut them from magazines showing related pairs, e.g., cows and a bottle of milk, a tree and a wooden chair, etc. Mount the pictures on cardboard or oaktag. Have the children match the pairs.

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8. **Sequencing.** To help children understand the stages of *production*, draw pictures or cut them from magazines that show the sequence from raw materials to final product in the hands of a consumer, e.g., wheat being planted; harvested; shipped to a mill; ground into flour; baked into bread; shipped to a store; purchased at a store; taken home; and eaten. Gather or draw several sequences that children can arrange in proper order.

9. **Substitutes and Complements.** Discuss the difference between substitutes (mittens and gloves are substitutes because either one can be used for the same function) and complements (hamburgers and ketchup are complements because they are used together). Hand out a worksheet on which you have drawn pairs of goods. The students should put a C (complement) by the pairs of goods that are usually used with each other (a bat and a ball, bread and butter). They should put an S (substitute) by the pairs that can be used instead of each other (a cup and a glass, a pen and a pencil). A matching game can be made by cutting out the pictures and mounting them on cardboard or oaktag.

10. **Muffins and Butter.** Here's a chance for children to be producers of goods and to illustrate graphically the idea of complements. Make one or more batches of the following recipe.

Whole Wheat Muffins	(One dozen large muffins)
2 c whole wheat flour	Combine dry ingredients.
2 t baking powder	Combine wet ingredients.
½ t salt	Quickly fold wet and dry together, until flour mixture is just moistened. Spoon into greased muffin tin. Bake at 400° for about 20 minutes.
1 egg, beaten	
¼ c oil	
¼-½ c honey or molasses	
1½ c milk	

A small group can make the muffins or, if done with the whole class, "volunteers" can come up and help. While your goods are baking, pour one cup of heavy cream into a clean glass jar and add a dash of salt. Screw on the lid. Have the class sit in a circle and pass the jar around once. When the jar returns to you explain that with their help, the cream will turn into butter. Pass the jar around again and have each child shake it two times. Count the number of shakes it takes for the butter to form. It will probably take more than one trip around the circle for this to happen. Cold cream takes longer to turn into butter than room temperature cream. By the time the muffins are done, the butter should be ready to complement them.

11. **A Trip To The Cafeteria.** Take your class on a visit to the school cafeteria to see how the school lunch is prepared. What is produced there? (lunch). Is it a good or a service? (good). Where does the raw food (resources) come from? Who are the consumers? Trips to local stores and businesses can also be planned to reinforce these concepts.

12. **Opportunity Cost.** Construct a learning center in which students can practice making opportunity cost decisions. Draw pictures of resources and products that can be made from them, or cut pictures from magazines, e.g., a picture of a cow being milked and pictures of a glass of milk, cheese, ice cream, yogurt, etc.

Have the children pick a resource and the product (only one product can be produced) they would choose to produce from that resource. Have them determine their opportunity cost of *production* (their next best choice of a product to be produced from that same resource). This can also be a Concentration-type game by using the same number of pictures of each resource as products from the resource.

13. **Market Survey.** Before a class party or other event conduct a market survey to determine what the students' favorite two cookies are. List four or five types of cookies on the board and ask for a show of hands. Do the same for beverages. You can also conduct a survey of favorite party games.

The next day, pass out a survey form to find out how many cookies the students would be willing to buy at different prices. Use a similar survey form for beverages.

Form a corporation and sell stock. One share could cost between 50c and $1, depending on projected costs of the party. Have the class calculate the cost of the venture and determine how much stock has to be sold in order to break even.

Make a list of the resources needed to have the party. Post help-wanted ads for the various positions to be filled, e.g., shoppers, cookie bakers, decorators, beverage crew, entertainers, vendors, etc. Determine the price and quantity of cookies to be sold at the party on the basis of *supply* and demand as reported in the survey forms.

If it is permissable in your school, you may elect to sell your wares to other classes, in the school cafeteria at lunchtime, or to parents at an open house. Conduct market surveys accordingly.

When the party is over, have the class count the income from the venture. Children may then redeem their stock. A dividend can be paid if there is a profit. If there is a loss, those who purchased the original stock will lose money on their investment.

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3-4

PAPER TOWEL PANDEMONIUM

by Suzanne Moulder

Suzanne Moulder, Economic Education Coordinator for The University of West Florida Center for Economic and Marketing Education, has won recognition in the International Paper Company Foundation Awards Program. She conducts in-service teacher training programs in economics.

Supply, Production

The decisions and actions of producers and consumers in the marketplace make our economy go 'round. A consumer's willingness and ability to buy a certain product at a variety of prices at a specified time is called demand. A producer's willingness to produce and sell a certain product at a variety of prices is called *supply*. *Supply* and demand, interacting, determine prices in a market economy. As producers and consumers, we all affect and are affected by *supply* and demand.

Most eight-and nine-year-old children have had ample experience as consumers but relatively little experience as producers, and therefore have given little thought to the resources that go into producing the goods and services they so eagerly consume. Once they have a chance to stand in the producer's shoes, they quickly comprehend that the producer can't give his products away. A *production* experience often makes a student a better consumer, one concerned with workmanship and quality as well as price.

While getting acquainted with the role of the producer, students will learn that the price consumers are willing and able to pay will determine the amount producers are willing and able to *supply*. They will see that the price must exceed the producer's cost of *production* including the factors of *production:* land (natural resources), labor (all human endeavor), capital (buildings, tools and machinery). But perhaps more importantly, the producer should exceed the opportunity cost; if more income or satisfaction can be obtained from another job, the producer should consider changing jobs.

Although there is a connection between work and income, it is also important to encourage respect for work done at home and volunteer work. Students should understand that family income is limited and as a result, none of us can have all the things we want (scarcity). Ideas and suggestions from Sue Dyess, Wanda Padgett, Sue Broulliette and Bobbi Smith have been utilized.

Goals

Students will:

1. Understand that *production* must precede consumption.
2. Be able to name and give examples of: the factors of *production* – land (including all natural resources), labor (all human effort, both mental and physical) and capital (tools, equipment, buildings).
3. Understand that *supply* is the amount of a product that producers are willing and able to sell at different prices at a particular time.
4. Understand that the quantity supplied varies with price. Higher prices generally result in greater quantities being supplied, and lower prices generally result in smaller quantities being supplied.
5. Be able to draw a *supply* curve (schedule), a graphic expression of the quantities of a product producers are willing and able to *supply* at a variety of prices during a specific time period.
6. Understand that the price must exceed the cost of *production* if the producer is to continue *production* of that product.
7. Understand that the payment to the producer must exceed the opportunity cost of *production* (what could be earned elsewhere).
8. Understand that sometimes adding workers won't increase output (quantity produced) as much as expected because of diminishing returns.
9. Understand that to bring greater quantities of a good to market, higher prices are needed to lure more workers and more resources from the *production* of other goods.

Teaching Activities

1. **Producers and Consumers.** Explain that we are all consumers for we all use goods, wear clothes, eat food and need others to provide services for us. Ask students for examples of things they have consumed in the last week and write them on the board. Explain that our consumption is of two kinds, goods and services. Goods are tangible things while services are intangible, such as useful work done for us by someone else. Looking at this list, determine which things are goods and which are services. (Mark a "G" by the goods and "S" by the services.) Producers are people who provide goods and services. Multiple producers are involved in the *production* of any one good or service. Have the students list some of the producers involved in the *production* of the goods and services listed previously on the board.

   Example: Jeans (G): Producers: cotton grower, trucker, factory seamstress, sales person, etc.
   Haircut (S): Producers: hairstylist, receptionist, shampooer, etc.

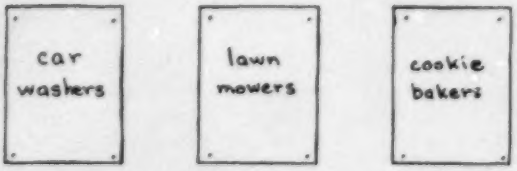
2.

Circle the resources that make up the cost of production for building a birdhouse.

Jason and Alice can build birdhouses at a cost of $2.50 and sell them for $3.00.

1. Suppose the price of lumber increases, what will happen to the cost of production for birdhouses?
   (increase) decrease
2. Suppose the cost of lumber decreases, how many birdhouses will they want to sell at a price of $3.00?
   (more) fewer
3. Suppose consumers are willing to pay only $2.00 for a birdhouse, how many birdhouses will they want to sell?
   more, (fewer)
4. Suppose consumers are willing to pay $6.00 per birdhouse, how many birdhouses would they want to sell?
   (more) fewer

3. **Supply activity.** Post each of the following signs in a different location in the room. Tell the students, "Each of you is a potential producer. Think about which job you might like. You don't have to work if you don't want to."



Round 1: Announce that students can earn 50c per hour doing any of the jobs. Have them stand by the sign of the job they want to do or remain seated if they don't want one. Count the number in each group and keep a record on the board.

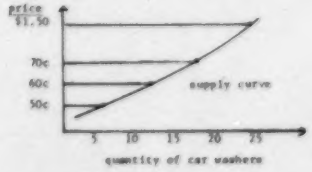
Round 2: Announce that more people want car washes (or choose the least popular job) so they are willing to pay 60c per hour. The other jobs are still 50c per hour. Students can change jobs if they want or keep the same job. (Perhaps any who didn't work in Round 1 will join in.) Count the number in each group and record the numbers of those who will work for 60c. (Stop here if all students are now employed; if not, go on to Round 3.)

Round 3: There are still numerous people who want car washes. They will pay 70c per hour. Allow students to move as before and record the new figures. (If most of the students are participating, stop here. If most of them are not joining in, raise the price of car washing to $1.50 per hour and see if you can lure them from the ranks of the unemployed.)

Looking at the chart, guide the students to the understanding that *supply* is the amount producers are willing and able to sell at a variety of prices; more people will wash cars at higher prices than lower ones; higher prices are needed to lure additional car washers from other occupations and from the ranks of the unemployed; the opportunity cost to a producer is the job that is not done. Some students may have given up the opportunity to earn more income by taking a job they enjoyed.

Draw a bar graph to show that more car washes will be supplied at higher prices than at lower prices. If you put a large dot at the end of each bar, then erase the bars and connect the dots, you have constructed a *supply* curve, an important tool used by economists. A *supply* curve shows the relationship between price and quantity supplied. Have students graph the information with you, using one color for the bars and another for the *supply* curve.

price per hour	quantity of car washers
50c	6
60c	12
70c	18
$1.50	25



4. **Diminishing returns.** Sometimes producing more of something brings lower unit costs of *production*. When there is a job to do, two people can often do it more than twice as fast as one. But sometimes when we try to increase *production*, we run into diminishing returns. Have the class try the following experiment.

String two clothes lines across the room. Place a roll of paper towels and a bag of clothespins (about 50) nearby. Give a volunteer one minute to see how many towels can be torn off the roll and hung on the line (two pins to a towel, torn ones don't count). Dropped towels and pins must be picked up. Write the score on the board.

Remove the towels. Now time two workers for one minute. Write their score on the board. Repeat several times, each time adding an additional worker. At some point, the additional worker will add fewer units than the one before him. This phenomenon is called "diminishing returns." It can even get to the point where an additional worker causes the total to fall.

The class will probably experience diminishing returns by the eighth worker. When you feel that the concept is clear, i.e., that more workers will not necessarily produce more per worker, end the activity. Explain that the workers were all doing their best, but that they simply reached a point of diminishing returns. Ask how many of them have ever washed dishes. Suggest that two people might be twice as fast as one; but can they imagine washing dishes with ten people?

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5-6

NEWSPAPER SUPPLY

by Carol Allen

Carol Allen is a fifth and sixth grade teacher in Fayette R-III Schools, Missouri. She developed an economics curriculum while involved in the Developmental Economic Education Program (DEEP).

Supply, Production

The concepts of *supply* and *production*, and the relationship between the two, are relevant to fifth and sixth grade youngsters. Many upper elementary age students have experience not only as consumers, but also as producers. They babysit or mow lawns for wages, or do household chores to earn an allowance. They are familiar with producers from observing parents' occupations or manufacturing and agricultural concerns in the area in which they live. Television news programs tell them of increases or decreases in *production*. Children can obtain a greater understanding of our economic system by examining the *production* process (the factors of *production*) and the motivations for increases or decreases in *production*, through an understanding of the concept of *supply*.

Examination of these concepts also reinforces understanding of opportunity cost and scarcity for the child. *Production* decisions, as well as personal decisions, involve choices among alternatives. If a company chooses to increase *production* of hot wheel cars because it can sell them at a higher price, it would be using its limited resources for that purpose and therefore could not use those resources to produce some other toy.

Goals

Students will be able to:

1. Identify producers as those who *supply* goods and services.
2. List the factors of *production*.
3. Graph a *supply* curve.
4. Explain that a greater quantity is supplied at a high price and a smaller quantity at a low price.
5. State reasons for increases or decreases in *production*.
6. Explain the effects of the law of *supply* on *production* decisions.
7. Analyze the opportunity cost of shifts in *production*.

Teaching Activities

1. **Vocabulary Study (Language Arts).** To understand *supply* and *production* there are several terms with which the students should be familiar. These include: producers (*supply* goods and services), land (natural resources), labor (all human endeavor), capital (buildings, tools, machinery) and *supply* (goods and services available for consumption). After class discussion of the definitions, assess student understanding as follows:
   a. List examples of producers and consumers and ask students to label them. Note: Most consumers are also producers and most producers are also consumers: homemakers are consumers, but also produce baked goods, clothing, etc. A farmer produces food but also consumes farm machinery.
   b. List examples of various factors of *production* and have students label them as either land (natural resources), labor (all human endeavor) or capital (buildings, tools, machinery).
   c. Have students write a few paragraphs or a creative short story using the terms correctly.

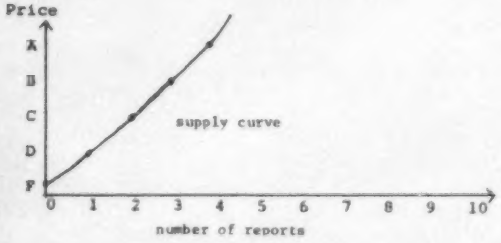
2. **What Would You Do? (Reading, Decison-making).** Present students with a copy of the following situations. Students read each situation and answer the question posed at the end. Have students assemble in small groups to compare their answers and discuss their reasoning. Follow up with class discussion.
   a. Charlie has a paper route. He uses his bicycle to deliver the papers to his customers. He earns two cents for each paper he delivers. Charlie can earn three cents per paper for each of 25 new subscribers to the newspaper. If you were Charlie would you try to get the new subscribers? (YES, that is, if 75c per day additional income exceeds his opportunity cost for the use of his time.)
   b. Charlie sold 25 new subscriptions. How much more money does Charlie earn each day than he did before he sold the new subscriptions? Should Charlie try to get even more new subscribers? ($.75; It depends on his opportunity cost.)
   c. Because he now has more papers to deliver, Charlie finds that there is more wear and tear on his bike tires. If a new bike tire costs $15.00, and Charlie calculates he will need a new one every two months, should Charlie keep the extra 25 subscribers? (yes) Should he if he had to replace the tire every two weeks? (no)
   d. Charlie's paper route used to take him an hour after school. Since he added the 25 customers, the route now takes him an hour and a half. If Charlie adds another 25 customers, he will make more money, but the route will take him two hours. What is Charlie's opportunity cost of adding more new customers? (one half hour)

In class discussion point out that in situations a and b, Charlie wants to increase his *production* because of the law of *supply:* he is willing to produce more at a higher price than at a lower price. In situation c, Charlie has to consider his costs of *production* in relation to increasing his *production.* If those costs increase faster than the price he recieves, he will decrease his *production.* This situation also illustrates the idea of diminishing returns: at some point it will not be profitable for Charlie to increase his *production* due to simultaneously increasing costs, i.e., the loss of free time, of Charlie's increasing *production.*

3. **Supply Graphs (Math).** Survey students to discover how many reports they would be willing to write for various "prices" (grades). Complete the chart. Students then will use the chart to plot a *supply* curve.

Price	Quantity Supplied (Average per student)
A	4
B	3
C	2
D	1
F	0

Graph:



Point out that a *supply* curve slopes upward, to the right; that the higher the price, the greater the quantity producers are willing to *supply;* also, that the lower the price, the smaller the quantity producers are willing to *supply.*

4. **Bulletin Board (Reading, Decision-making).** Gather newspaper clippings or create situations in which price increases or decreases of a specific product occur. Make a bulletin board of these and ask students to read the articles, then discuss whether *production* of that item will increase or decrease. Each article could be tagged and the class should attempt to follow the progress of the *supply* of that particular product to determine if their predictions were correct, and if not, the reasons they were wrong.

5. **Guest Speaker (Social Studies, Interviewing Skills).** Ask a representative of a local manufacturing firm or a farmer to talk to the class about why *production* is increased or decreased. In agricultural areas, students can listen to market reports on commodity futures and predict changes in *production* accordingly.

6. **Assessment Activity (Social Studies, Logical Reasoning).** Use the following study sheet to assess student understanding of the concepts of *supply* and *production.*

Using what you know about *supply* and *production,* decide whether producers would increase or decrease *production* in the following situations:

a. People are willing to pay higher prices for air conditioners because there is a long heat wave. The quantity of air conditioners produced will _____ (increase because producers are willing to *supply* a larger quantity at a higher price.)
b. A new contract has increased the labor costs of producing automobiles by 20 percent. New car sales have fallen by 10 percent. What will happen to the quantity of cars produced? (It will decrease because producers will *supply* less when *production* costs increase.)
c. More and more people are beginning to ride bicycles to and from work. What might happen to the *production* of automobile tires? It will decrease because demand will be lower.)
d. What would be the opportunity cost to a tire manufacturer continuing to produce automobile tires in the example above? (It will increase because other fields of *production* would become relatively more profitable.)
e. What would happen if producers increase their *production* beyond the quantity demanded by consumers? (A surplus will result; price will decrease.)

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(cont'd from page 1)

A publication describing the winning projects in more detail is being prepared. Its availability will be announced in **The Elementary Economist.**©

Judges for the competition were Mr. Lawrence W. Bloch, Mr. Carter B. Hart, Jr. and Dr. Anne F. Pooler.

Mr. Bloch is Social Studies Supervisor K-12, in the Norwalk, Connecticut, public schools. He has wide teaching and administrative experience. Mr. Hart serves as social studies education consultant to the New Hampshire State Department of Education. He has been a social studies teacher as well as an elementary and junior high supervising principal.

As Assistant Dean for Curriculum and Instruction in the College of Education, University of Maine-Orono, Dr. Pooler is in charge of the undergraduate program, elementary and secondary Master's programs and doctoral programs in reading, science and social studies.

Dr. George Fersh serves as senior consultant for The National Center Awards Program.

LESLEY ENROLLMENT AND PLACEMENT

In spite of media focus on the cost of private education and the job market for teachers, Lesley College opened its 1980-81 academic year with the largest enrollment in its history! Of the 840 undergraduate women, 300 are new students which reflects a 9.7 percent increase over projected total enrollment. Twenty states are represented in addition to Puerto Rico and four foreign countries. More than half have seiected Special Education as their major. Approximately 52 percent received some form of financial aid from the College.

Above all, Lesley students value their practical, hands-on field experiences of the four years, the quality and flexibilities of the programs and the outstanding record of more than 90 percent placement for graduates! Lesley's programs include majors in Education and Child and Community, nine liberal arts minors, seven specializations and, for Education majors, the choice among three single teaching certificates or four dual teaching certificates.

We're Expanding . . .

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LESLEY WINS SILVER ANVIL AWARD

The nation's highest award for public relations achievement was presented to Lesley College in May in recognition of its programs on behalf of The National Center of Economic Education for Children. The coveted "Silver Anvil Award" was presented at the Public Relations Society of America's 36th Silver Anvil Awards Banquet held at the Franklin Institute in Philadelphia.

Lesley President Dr. Don A. Orton accepted the award for the College. More than 400 public relations executives and corporate officers were present.

Lesley College, recognized by educators throughout the world as a leader in elementary education was the only winner in the category of "Non-profit Institutions: Institutional Programs."

A distinguished panel of 50 public relations and media executives served as judges for the Awards Program evaluating a record total of 419 entries against criteria which included importance of objectives, thoroughness of research, originality, judgment, completeness of the plan, effectiveness of execution, achievement of objectives and measurement of results.

Lesley's program was selected the only winner in its category on the basis of its contribution to the public communications profession, presentation and execution.

In July, the Council for the Advancement and Support of Education (CASE) awarded the College its Certificate of Exceptional Achievement for the planning and implementation of marketing and public relations programs for the National Center of Economic Education for Children.

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